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Ownership Structure and Asset Sales: An Empirical Analysis

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Abstract

This paper examines the effect of ownership structure on the market assessment of asset sales. Three types of ownership structures are identified: large block outside, inside, and widely held. Empirical results indicate that firms with large block outside shareholders experience significantly positive announcement effects for both buying and selling firm samples. These are significantly greater than those for the inside shareholder and large widely held firms. Two other questions are examined. For the second question, the sample is partitioned in a pair wise way to see if the ownership structure of the firm being transacted with has an effect. Results suggest that the ownership structure of the firm on the other side of the deal does have an effect The third question examines whether ownership has an effect in the presence of other types of information, specifically, the release of the price paid for the asset. In the presence of an ownership variable, the disclosure of price does not have an effect on the market's reaction to the asset sale.

JEL Classification: G32; G34;G38

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1. Introduction

The standard theory of the firm postulates that all firm behavior is governed by profit maximization. For the publicly held corporation, this implies that the sole motivation of management is to maximize the firm's stock price and shareholders' wealth. From this perspective, a firm's ownership structure should not matter. On the other hand, agency theory suggests that ownership structure could be very important. In a widely held firm, there may be a free rider problem because no small stockholder finds it cost effective to monitor the management of the firm, even though it would be in the

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stockholders' common interest to do so. Additionally, management incentives may differ from those of shareholders in the widely held corporation, leading to potential deviations from the goal of maximizing shareholder wealth. In these situations, large stockholders might play an important role in monitoring and governance.

The purpose of this paper is to determine whether ownership structure affects firm performance. This requires that firms be divided into ownership types and that circumstances be found where differences among types of firms are reflected in their behavior. Three ownership structures are identified: widely held firms, firms with large outside shareholders, and large inside shareholder firms.

Firms are then compared with regard to effects of the acquisition or sale of an asset on their stock price. If there is no observed difference in the stock price effect (announcement effect) between the ownership types then the conclusion would be that ownership structure is not seen to be a factor affecting firm performance (at least in this case). But if (as will turn out to be the case) firms with large outside shareholders experience a greater announcement effect than either widely held or large inside shareholder firms, then ownership structure does influence firm performance.

Performance is measured by the market's reaction to the announcement of the asset sale for both buying and selling firms. The market's reaction is recorded in an "event study", a study of the changes in the stock price (and therefore the market value) around the announcement of the transaction. Observed changes are then compared to what would be expected if there were no event or transaction. If a transaction is seen to be in the best interests of shareholders, there will be a positive change in the stock price. If the change in stock prices are greater for firms with large outside shareholders than

other ownership structures, that would be evidence that such firms are viewed by the market as making better deals than other firms. This may result from the incentive of the large outside shareholder to monitor management.

If the transaction is not perceived to maximize shareholder wealth, a negative announcement effect would result. This may be the case in widely held firms, where management may have effective control, and the possibility exists whereby the buying or selling decision might benefit management and not shareholders. These changes in stock prices are compared across the three types of firms to see whether the market assesses any difference between the different ownership structures.

The development of the sample was extremely laborious and involved several steps (a more detailed discussion of the sampling procedure is presented in section 4). First, a sample of interfirm asset sales was compiled (by hand). Next, this sample was partitioned into the different ownership categories utilizing two different data sources. Then an announcement date was identified. An event study was then used to compute abnormal returns for various event windows around the announcement date. If ownership structure affects the market's assessment of a transaction, then the abnormal returns should differ between the ownership structures.

The main result of the investigation is that ownership affects firm performance. For the buying firms, the large outside shareholder sample has a positive significant market reaction which is significantly greater than that for the widely held and large inside shareholder samples. Of the latter two samples, both market reactions are negative, with only the widely held sample return being significant.

For selling firms the results are similar, with the large outside shareholder sample again having a significant positive market reaction that is greater than that experienced by both the widely held and large inside shareholder samples. The one difference from the buying firm sample results is that market reaction for the widely held selling firm sample is not significant.

Firms with large outside shareholders (buyers and sellers) experience positive abnormal returns that are greater than those of both widely held and large inside shareholder firms. There is on average a positive market reaction to the presence of a large outside shareholder that is significantly greater than that experienced by widely held and large inside shareholder firms.

Two other questions are investigated in this paper. The first is whether returns resulting from the transaction are affected by the ownership structure of the firm on the other side of the transaction. For example, do large outside shareholder firms do better (or worse) when buying an asset from a widely held firm than from a large inside shareholder firm? To answer this question, samples of matched pairs of buyers and sellers are constructed based on ownership structure on both sides (widely held buying from widely held, large outside shareholder firm buying from large inside shareholder firm etc.). Then stock price effects resulting from the transaction are compared across the different matched pairs.

There are a number of cross effects found, the strongest being that firms dealing with large inside shareholder firms (except widely held) have lower stock price effects than when they are dealing with other ownership types. This suggests that the market

views dealing with a large inside shareholder firm as having a negative effect. Other cross effects are discussed in much greater detail in the empirical results section.

The second question concerns the effect of the disclosure of the price paid for the asset on the stock price reaction for both buying and selling firms. The publication of the price in an interfirm asset sale is shown to have no effect on the stock prices of buyers and sellers for any given ownership structure. Earlier studies have suggested that disclosure of the price has some effect on the market's assessment of the transaction. However, in the light of both ownership structure and price disclosure, the former has explanatory power but the latter does not. These results differ greatly from previous research.

This paper conveys knowledge of ownership structure in several ways. It is one of the first studies to take explicit account of inside and outside large shareholders in the same firm, which is important because of the potentially different effects on corporate performance the two types may have. It examines the effect of ownership structure on a specific transaction that affects corporate performance, rather than on broad measures of performance. This is important because it helps to develop a more explicit link between ownership structure and corporate performance by measuring something that ownership structure can affect. It studies cross effects from the ownership structure of the firm on the other side of the transaction. And, finally, it compares two types of information available to the market: ownership structure, which is not subject to management manipulation, and the disclosure of the price paid for the asset, which is under the control of management. The results show that, when ownership structure is taken into account,

the disclosure of the transaction price does not have a significant effect on the market's assessment of the asset sale.

Further background on some of the concepts discussed so far will now be provided.

Background

Most research in corporate finance has focused on the widely held firm, as opposed to firms with large shareholders. The widely held firm is defined in this thesis as having many small shareholders, each owning less than five percent of the company's shares. Because of the diffusion of ownership, individual shareholders have little power to affect corporate decisions. Due to the small risk associated with their ownership in the company, and the high costs involved, shareholders have little incentive to monitor management. Consequently, management has effective control of the widely held organization.

Many problems can result from the separation of ownership and control. If managers do not have an ownership stake in the company, they may make decisions that are in their own best interests, rather than those of the shareholders. To address this issue, research has focused on aligning management and shareholder interests through reform of the board of directors; reward systems; replacing management through takeovers; the managerial labor market; and management contracting.

Little empirical work has examined the role of large shareholders in organizations, despite the fact that there are a significant number of corporations where large shareholders are present. In a survey of NYSE, AMEX, and OTC firms, 20% had

at least one large outside shareholder owning 10 or more percent of the stock, and 15% of the firms had at least one insider owning ten or more percent (Holderness and Sheehan, 1988). Furthermore, recent examples provide evidence that the presence of large shareholders in an organization can increase the market value of the corporation, through their role as monitors of the firm.

In November of 1994, when Chrysler Corp.'s largest shareholder (owning 9% of Chrysler's stock) demanded action be taken to improve the company's stock price (Globe and Mail, November 15, 1994). As a result of Kerkorian's proposal, Chrysler's stock increased $2.87, from $46 to $48.87. In fact, the total increase in value resulting from Kerkorian's action was over $1 billion (359 million shares x $2.87). The increase in wealth accruing to Kerkorian was over $90 million. At the time, market analysts did not believe that Kerkorian presented a takeover threat to the company. Therefore, the rise in stock price can be attributed to non-control type activity. On December 1, 1994, Chrysler announced that three of Kerkorian's proposals had been put into action. Because of the size of Kerkorian's stock holdings, there was an incentive to monitor Chrysler closely. His size also forced the company to take his proposals seriously. This case illustrates how a corporation's governance structure (i.e. large shareholder present) can increase its market value.

In another case, CalPERS, the California Public Employees Retirement System, targeted 42 of the worst performing companies in its investment portfolio (Nesbitt, 1994). Armed with expert analysis, it approached the management of these companies and argued for reform. The 42 companies, on average, underperformed the S&P 500 index by 66.4% for the five year period prior to CalPERS' involvement. The cumulative excess

returns for the five year period after the initial involvement averaged 41.3% for each company. With an average holding of $35 million per company, CalPERS' estimated gain in each company was $2.9 million. For a given year, the total benefit to CalPERS from activism was $121.8 million while the total cost was $500,000 -- a net benefit of $121.3 million. Therefore, the gains to a large shareholder from monitoring corporate management can be substantial.

More recently, there is a class of activist funds such as Relational Investors and Hermes Focus Funds whose strategy is to take significant ownership positions in a dozen or so companies in order to wield wider influence. As a result they can be more aggressive with management. The results so far have been impressive: Relational Investors has returned an average of 29% since its inception eight years ago and Hermes Focus Funds has returned an annual average of 28% over the last five years (Economist, 2004).

Problems with the Widely Held Firm

There are two major difficulties with the widely held firm: a principal agent problem, and a collective action problem. In the widely held corporation, shareholders (the principals) elect a board of directors who, in turn, appoint management (the agents) to run the firm on behalf of shareholders. Theoretically, the board is supposed to choose management to maximize shareholder wealth, to monitor managers to ensure they run the corporation in the interests of shareholders, and to replace them if they do not. In reality, the relationship often works in the opposite direction, with managers nominating

Directors.[1] This is a standard principal agent problem. If management's incentives differ from that of maximizing shareholder wealth, there is no one to stop them from pursuing actions consistent with their own incentives. Excess consumption of perquisites, shirking, and excess compensation are examples of such actions (when Ross Johnson was CEO of RJR Nabisco, he maintained a fleet of 10 jets and 31 pilots).

If individual shareholders monitored management directly, the above problems would be minimized. However, in a widely held firm, no individual shareholder has an incentive to monitor, because monitoring has the characteristics of a public good. If one shareholder invests in monitoring, all shareholders benefit, but the monitoring shareholder bears all of the cost (the free-rider problem). Small shareholders are unable to capture enough of the benefits to make monitoring worthwhile. In the widely held firm, the only way to overcome this problem is for shareholders to collectively monitor. However, with potentially thousands of shareholders, the coordination problems make this next to impossible. It is rational for individual shareholders to choose not to monitor, a classic free rider problem. There is always the possibility of a takeover acting as a potential disciplinary device for management. However, this is a rather extreme governance device and quite costly to implement.

Potential Benefits of a Large Shareholder

The presence of a large shareholder may solve the collective action problem of monitoring. With a large stake they can capture enough of the benefits from monitoring to make it cost effective. Other shareholders may benefit without sharing the cost, but the large shareholder monitors regardless because his/her personal benefit outweighs the

[1] Monks and Minnow (1995) provide an excellent discussion of board-management dynamics.

cost. In addition, the large shareholder may be more likely to influence management because of the size of their holdings. The monitoring by a large shareholder may be a more flexible governance mechanism than the takeover. The large shareholder may be monitoring the firm on an ongoing basis, and may be able to make a number of changes that are value-increasing, but not to the extent to make a takeover cost effective.

The above arguments show that a firm's ownership structure is potentially of great importance. A monitoring role would be associated with a large outside shareholder (one who was not directly involved in management of the firm). Inside owners may have different incentives and these are discussed in the literature review.

Why Has Research Focused on the Widely Held Firm?

If large shareholders may serve a value increasing role, one might wonder why research has focused on the widely held firm. The most common explanation rests on an assumption made that the widely held firm is the most efficient form of corporate governance. Indeed, arguments persist which suggest that the widely held firm evolved naturally over the years because of its economic efficiency. However, work by Roe (1994, 1991, and 1990) suggests that political and legal factors have had a lot to do with its evolution. For example, U.S. laws have prevented institutions that had the required resources (banks, insurance companies, mutual funds, and pension funds) from taking an ownership positions in a firms over the years, making the widely held structure common. Roe (1994) summarized these rules as the following. Banks have been prevented from owning stock. Mutual funds are not generally allowed to own large blocks of stock. Insurance companies, until recently, were not allowed to own stock, and now can only

place a certain portion of their portfolio into an individual company. Public pension funds have been less restricted; however, securities regulations have made it difficult for them to influence the management of companies. Corporate pension funds are under the control of management and, therefore, unlikely to act in a monitoring role.

Similarly, individuals are unlikely to have the resources to take large stakes in companies but, even if they do, many state laws restrict the rights of large shareholders. Pound (1993) provides a detailed analysis of this issue.

A behavioral barrier also appears to exist. For example, many large institutions follow a passive indexing investment strategy, taking small stakes in thousands of different companies. Taking a large, active ownership position requires a completely different set of skills that many money managers may not have or wish to develop. Furthermore, since little research has examined the effects of different types of ownership structure, they may not understand the benefits from purchasing a large shareholding. Clearly, further work such as this will help to shed light on whether different ownership structures produce better results, before action will be taken. Thus, the results of this research will have implications for three different groups including policy makers in the U.S., potential large outside investors in corporations and, to firms themselves, all of whom share an interest in improved corporate performance.

2. Related Literature

Asset Sell-Offs

The literature on asset sales is primarily empirically based and focuses, for the most part, on the market's reaction to the announcement of the sale. Earlier research involved

samples of buying and selling firms which were studied in a general way, without the sample being partitioned in any particular way. More recent work in this area began to examine samples of firms partitioned by certain characteristics that were hypothesized to have an effect on the market's assessment of the sale.

Alexander et al. (1984) examined a sample of selling firms and found a positive announcement effect. Jain (1984) and Rosenfeld (1984) examined the announcement effects on both buying and selling firms finding positive effects for both buying and selling samples.

Klein (1986) partitioned the sample divestitures based on whether the price of the transaction was disclosed. She found that only the sample of firms that revealed the price experienced a positive announcement effect.

Tehranian et al. (1987) examined whether or not there was a relationship between a firm's compensation system and the wealth effects resulting from its announcement of an asset sale. These researchers questioned the assumption made in earlier work that corporate sell-offs are in the best interests of shareholders. They suggested that sell-offs can be motivated by managerial self interest, particularly when there is the possibility that they will increase profits and, consequently, management compensation. They were the first to suggest that a firm's governance structure may affect the market's assessment of an asset sell-off. They tested the hypothesis that asset sales by firms with long term performance compensation plans will have a more favorable market reaction than sell-offs by firms without these compensation plans. The authors concluded that sell-offs by firms with compensation plans rewarding long term performance were assessed more favorably by the market than sell-offs by firms without such plans. Their hypothesis that

long term compensation plans are important mechanisms in aligning management and shareholder interests was clearly supported.

Sicherman and Pettway (1987) examined a number of factors affecting whether or not the market assessed the buying of an asset to be in the best interests of acquiring firm shareholders. They stated that, in many transactions, there is only one potential buyer. Therefore, economic rents may be earned in an asset sell-off because the market may not be perfectly competitive. They hypothesized that the portion of rents (measured by the announcement effect) that go to the buying firm depend upon the following three factors:

1. The relatedness of the buyer and the divested asset.

2. The percentage of managerial stock ownership of the buying firm.

3. The financial condition of the selling firm.

The related sample (sample size = 49) had significant abnormal returns of 1.813% for the period t=-10 to t=-1, and 1.856% for t=+1 to t=+10. The unrelated sample (sample size = 98) had significant abnormal returns of -0.212% for the t= -10 to t= -1 event window and 0.275% for t=+1 to t=+10. The difference in the cumulative abnormal returns between the two samples was significant.

They next partitioned the sample based on managerial ownership of the acquiring company. Their hypothesis was that because managers have a large portion of their wealth tied up in human capital from their job, they will seek to reduce this employment risk by diversifying the firm through the acquisition of unrelated assets. They stated that managerial ownership of stock may offset this risk and act as an inducement for managers to acquire related assets. This is the first study in this area to examine the effect of ownership structure on the market's assessment of the asset sale. The results

indicated that firms acquiring related assets were more likely to have a higher level of inside ownership than firms buying unrelated assets. The related acquisition sample had a higher mean inside ownership than the unrelated sample. The last question examined was whether or not the financial condition of the selling firm had any effect on the gains to the buying firm. They hypothesized that since the selling firm typically initiates the transaction, a negative change in the seller's financial condition may increase the necessity to sell assets and lead to a lower price, thereby benefiting the buying firm. They tested this by partitioning the sample based on whether or not companies had been downgraded by *Moody's* and/or *Standard & Poor's* during the two years prior to the announcement. They considered that this downgrade may lead to a weakening of the selling firm's negotiating position. The initial sample of 147 was partitioned into a subsample of forty-two firms who had been downgraded, and a subsample of 105 who had not. They found that the CARs for acquiring firms dealing with weak sellers exceeded those for firms buying from strong sellers.

Hirshey and Zaima (1989) examined the effect of insider trading and ownership structure on the market assessment of asset sell-offs. They believed that investment and financing decisions by management may not always be in the best interests of shareholders. Their hypothesis was that sell-offs by firms with large inside ownership with insider net-buy activity were more likely to be viewed by the market as being compatible with shareholder interests. For this to hold, a positive price reaction was expected around the announcement of the sale. Their results supported the hypothesis.

Sicherman and Pettway (1992) were the first to measure the wealth effects of matched pairs of both the buyers and sellers of the same asset. They examined the effects

of both changes in financial condition and disclosure of transaction price on the wealth effects and distribution of wealth between the buying and selling firms. The financial condition may effect the negotiating power if the buying firm is aware of this and the seller may be forced to accept a lower price. They hypothesized that downgraded selling firms will experience lower abnormal returns than non-downgraded firms. The allocation of wealth between the buyer and seller should also be affected. Their results supported their hypothesis that the financial condition of the selling firm has an effect on the market assessment on both sides of the transaction.

Lang, Poulson, and Stulz (1995) examined the effect on selling firms based on the use of the proceeds from the sale of an asset. They hypothesized that management may sell assets for reasons other than increasing operational efficiency. Past work has explained a positive market reaction to asset sales by assuming that the transaction promotes efficiency. They referred to this as the efficient deployment hypothesis. They advanced an alternative hypothesis, which they referred to as the financing hypothesis. The motivation for the latter was that, since managers value control and firm size, they have little incentive to sell assets unless there is a need to raise funds and cannot do so cheaply on capital markets. For example, management may choose to sell assets to raise funds, rather than go to capital markets. If this happened to be the case, providers of capital may recognize management motives and require a higher rate of return or more restrictive covenants. Therefore, management may choose to sell an asset to raise the funds. Their results supported the financing hypothesis and were contrary to the efficient deployment hypothesis.

Kruse (2002) analyzes factors that are potentially associated with higher incidence of sales by poorly performing firms. His results suggest that firms are more likely to sell assets if they are suffering from low debt capacity, experiencing the nonroutine turnover of its top executive, or have mad acquisitions prior to their performance decline. He also found that sample firms' governance structure is unrelated to the incidence of asset sales.

Dittmar and Shivdasani (2003) study a sample of diversified firms that alter their organizational structure through the divestiture of a unit. Their results suggest that firms experience a reduction in the diversification discount after the asset sale.

Ownership Structure

The literature on ownership structure includes studies showing very different effects of large inside and large outside shareholders on corporate performance, so these two areas will be presented separately, with research on the role of large outside shareholders as monitors of management presented first, and the effects of large inside ownership on corporate performance presented second.

Large Outside Shareholders as Monitors

Shleifer and Vishny (1986) developed a model that examined the possible role of a large minority shareholder. They assumed that although the large outside shareholder did not participate in managing the firm, it would own a large enough stake to motivate it to monitor management. If an opportunity to increase profits (by correcting inefficient management) presented itself, the large shareholder would seize it.

They suggested three ways in which the shareholder could improve inefficient management. First, the large shareholder could make a cash tender offer to gain control of the firm and replace management. In their analysis, the presence of a large shareholder is necessary for a value increasing takeover to occur. Second, the large shareholder could help an outsider, who has no initial stock position, takeover the firm. The third mechanism suggested was "jawboning", which involves informal negotiations with management to institute value increasing changes to the firm. Shleifer and Vishny assumed that this mechanism, although the least costly, would not have the same clout as the former two methods, and would likely only be used to make smaller and less valuable improvements.

Shleifer and Vishny were among the first to formally recognize that large shareholders may overcome the 'free-rider" problem that prevents small shareholders from monitoring management. However, they assumed that major increases in firm performance would only be arrived at through the rather drastic mechanism of a takeover. Whereas the everyday monitoring of management decisions (what they referred to as "jawboning") was discounted, this method may improve corporate performance to a greater degree than they assumed.

With respect to the latter issue, Zeckhauser and Pound (1990) examined the effect of large shareholders on corporate performance through their monitoring of management. They assumed that large outside shareholders could overcome the difficulty that smaller outside shareholders have in monitoring management, because the cost of monitoring would be offset by the benefits, whereas the costs for small shareholders would not be offset by their benefits. Specifically, they examined whether the continued presence of a

large shareholder had any significant effects on firm performance (measured by differences in expected earnings growth, dividend payout ratios, and/or leverage ratios), assuming that large outside shareholders were not interested in control related activity. Thus, they addressed the jawboning role that Shleifer and Vishny (1986) dismissed as being the least effective in terms of its impact on corporate performance.

Zeckhauser and Pound found that in the open information structure industries, large shareholder firms have higher expected earnings growth, whereas this difference did not exist in the closed information structure industries. For all industries, there was no difference in dividend payout ratios or leverage ratios, whether there was a large shareholder present or not.

Based on these results, Zeckhauser and Pound concluded that large shareholders may have an ongoing positive effect on firm performance through monitoring management, but only when their ownership positions are greater than 15%. Therefore, they dismissed the possibility that large shareholders owning less than 15% could play an effective monitoring role. Moreover, they used broad measures of firm performance to infer the role of shareholder as monitors, but they did not examine specific examples of the types of things that large shareholders monitor.

One study has attempted to examine a specific issue that large shareholders may monitor that affects performance. Tosi and Gomez-Mejia (1994) examined whether or not large outside shareholders acted as monitors of CEO compensation. They assumed that since monitoring is a behavioral process, it would be best examined by asking informed people about what is being monitored in the firm and the intensity of monitoring.

A questionnaire was sent to the senior compensation officer in the firms that had been targeted for the study, assuming that this officer was well informed about CEO pay practices. The sample was categorized as either owner-controlled or management-controlled, by asking whether there was any individual or institution outside of the firm who owned 5% or more of the stock. A firm was classified as owner-controlled if the response was yes and classified as management-controlled if the answer was no. In two separate studies, Tosi and Gomez-Mejia found that the level of monitoring of CEO pay practices was higher in owner-controlled firms than in management-controlled firms. They concluded that large outside shareholders do act as monitors of CEO pay practices.

The above literature established a potential positive effect of large shareholders on firm performance through monitoring of management. However, this paper also examines the effect of large inside shareholders on firm performance. The relevant literature in this area is presented below.

Large Inside Ownership

Whereas large outside shareholders are assumed to have a positive impact on firm performance, there are two competing hypotheses regarding the effect of inside ownership on firm performance: the convergence of interests hypothesis and the management entrenchment hypothesis. Jensen and Meckling (1976) suggested that as management ownership increases, managers are more likely to make decisions in the best interests of shareholders, because they will be affecting their personal wealth also. This convergence of interests hypothesis suggests that there is a positive relationship between inside ownership and firm performance. Demsetz (1983) and Fama and Jensen (1983)

stated that higher levels of inside ownership could lead to management entrenchment, because their higher degree of inside ownership could protect them from potential takeovers. This hypothesis suggests that firm performance may be affected negatively by higher levels of inside ownership. Two of the major empirical studies examining the effect of inside ownership on firm performance are presented below.

First, Morck, Shleifer, and Vishny (1988) studied the effect of inside ownership on firm performance by researching the relationship between Tobin's Q and the amount of stock owned by the board of directors. They used a sample of 371 U.S. firms in 1980. Tobin's Q (the ratio of the firm's market value to the replacement cost of its physical assets) was used as a proxy for performance and board ownership as a proxy for inside ownership. Given the competing nature of the above hypotheses, they predicted a non-linear relationship between firm performance and inside ownership. Utilizing piecewise regression techniques they found a positive relationship between Q and inside ownership over the 0% to 5% inside ownership range, a negative relationship from 5% to 25%, and a less positive relationship between Q and inside ownership over the 25% level.

Second, McConnell and Servaes (1990) examined the relationship between inside ownership and firm performance, using samples of 1173 firms from 1976, and 1093 firms from 1986 (U.S. firms). They regressed Tobin's Q against director ownership and director ownership squared. The coefficient for the former variable was found to be positive, while the coefficient on the latter variable was negative. According to McConnell and Servaes, this implied that the relationship between firm performance and inside ownership was curvilinear. The relationship was positive until inside ownership reached the 40% to 50% level, and was negative thereafter.

The two articles presented above provide support that inside ownership can affect firm performance in two competing ways. However, what is not clear from the literature is the level of inside ownership necessary for the effects come into play, making it difficult to make any predictions about how inside ownership will affect firm performance. Furthermore, like the large outside shareholder literature, these studies utilized a broad measure of firm performance (Tobins's Q) to infer the effect of large inside shareholders on firm performance rather than examining specific decisions that may have an effect on firm performance, such as asset sell-offs.

Legal and Political Environment

An important issue in this thesis is the environment that large shareholders face. If there are differences in performance between ownership types, how can there be equilibrium in the market? If large outside shareholders have a potential positive effect on corporate performance why are there not more of them? Although the focus of this thesis is not on the political and legal issues, it is nevertheless important to discuss the environment that large shareholders face.

Roe (1994) develops a political paradigm to describe the development of the U.S. corporation. He states that the dominant paradigm, the widely held corporation, is thought to have been the result of a natural economic evolution. Economies of scale and technology produced the dispersed ownership structure of the corporation. In order to take advantage of economies of scale, firms became so large that their capital need could only be filled by selling shares to many small, dispersed investors. This dispersion of ownership gave effective control to management, since no small shareholder had the

incentive to monitor. According to this explanation this form survived because it was able to balance the potential agency problems resulting from the separation of ownership and control, with the need to raise large amounts of capital. This implicitly assumed that there were no investors that had the resources to take large ownership stakes.

Roe changes this paradigm by arguing that economics by itself cannot explain the development of the widely held corporation. He posits that American politics prevented large financial institutions from becoming active taking significant ownership positions in large corporations. He states that institutions such as banks, insurance companies, mutual funds and pension funds were repeatedly stopped by U.S. laws from becoming large, active investors. Therefore, rather than being the outcome of a Darwinian competition, the American corporation was shaped by political and legal forces.

Blair (1995) discusses the effect of securities regulations on the trading activity of large shareholders. She states that SEC (Securities and Exchange Commission) regulations restrict the trading of securities by insiders. Insiders are defined by the SEC as any individual or institution holding 10% or more of the outstanding equity of a corporation. Insiders have to report all sales and purchases of the corporation's stock. If the insider happens to profit from this activity within six months, any profits may have to be given back to the firm. In addition, criminal charges can result from trading on "inside" information. Blair concludes that regulations regarding insider trading make it risky for institutions to own large blocks of stock in a corporation.

In summary, the literature review was very helpful in establishing a base from which a set of research questions could be developed. The literature on asset sales showed three characteristics that provide an excellent environment in which to study the

effect of ownership structure on corporate performance. First, economic rents are present, therefore the market views an asset sale has having an effect on corporate performance. Second, it was established that managers may buy or sell assets for reasons that are not in the best interests of shareholders, therefore agency costs are present. Third, in interfirm asset sales, characteristics of the selling firm have an effect on buying firm performance. The ownership literature suggested a positive role for large outside shareholders and two incentives for large inside shareholders that were predicted to have opposite effects on corporate performance. The market's assessment of asset sell-offs are used to answer a number of questions concerning the effect of ownership structure on firm performance. The next chapter develops the research questions.

3. Research Questions

In this section the hypotheses and research questions to be examined empirically in section five are developed. It is organized around three central themes that arose from the literature review. The first is whether ownership structure affects a firm's valuation during an asset sell-off. The second is to explain differences in valuation. The third compares the effect of ownership structure versus management signaling on the market's assessment of firm performance. The research questions arising from each theme will now be addressed.

The Effect of Ownership Structure

There are three types of ownership structure analyzed in this thesis: large outside, large inside and widely held. The literature presented in section 2 indicates that large outside

shareholders may have a positive effect on firm performance, through their monitoring of management. This research seeks to determine whether this potential effect exists. If it does, then the announcement effect resulting from an asset sale will be greater for firms with large outside shareholders than those of widely held firms. The literature related to firms with large inside ownership suggests two competing hypotheses concerning the effect of this type of ownership on firm performance. Thus, there are no clear a priori predictions as to how large inside ownership will affect announcement effects resulting from asset sales.

In a widely held firm, management is usually assumed to have effective control of the firm. If management incentives differ from those of shareholders, it could lead to decisions that do not maximize shareholder wealth. It is predicted that the market's assessment of these firm's decisions will be different than those of the other two types of ownership structure.

Therefore, the first question is:

Q1: Is there any difference in announcement effects between firms with different types of ownership structure?

This research study will analyze the relative announcement effects of the three types of ownership structures mentioned above.

Why Does Ownership Structure Affect Performance?

Whereas most research to date has examined the effects of asset sales on buyers and sellers separately, only one study has examined matched pairs of buyers and sellers

and one type of possible cross-effect during an asset sale. This thesis aims to examine two possible effects that can occur when firms are studied in matched pairs. The first results from the ownership structure of the firm on one side of the transaction, and the second from the ownership structure of the firm on the other side. The two effects are:

1) Own Type Effect
2) Partner Effect

An own type effect is the market's assessment of a firm's transaction based upon the firm's ownership structure. The market will assess a transaction as good if it is perceived to maximize shareholder wealth. For example, transactions within a firm whose managers are being monitored by a large outside shareholder may be assessed more favorably than transactions within a firm with a widely held structure. In this case, there would be a positive own type effect for the large outside shareholder firm.

A partner effect is the market's assessment of a firm's transaction based upon the ownership structure of the firm's partner. The market will assess the gain or loss that the firm experiences from dealing with its partner. For example, if a large outside shareholder firm is dealing with a widely held firm, the market may assess the widely held firm as not acting in the best interests of its shareholders because management has effective control. Thus, the market will assess the large shareholder firm as benefiting in the transaction, at the expense of the widely held firm, and it would experience a positive partner effect. Alternatively, if the widely held firm's transaction was being assessed, it may experience a negative partner effect when dealing with a large outside shareholder firm. For transactions involving firms with the same ownership structure, a partner effect

would not occur because the market would not perceive either party to have an advantage over the other in the transaction.

It is also possible that there is a combination of the first and second effects. For instance, a large outside shareholder firm that deals with a widely held firm may experience a positive own type effect as well as a positive partner effect, resulting in a greater overall announcement effect than if it was dealing with another large outside shareholder firm (where only an own type effect would occur). Another possibility is that, for certain transactions, there could be a negative own type effect, but a positive partner effect. Management might be selling an asset for reasons that are not in the best interests of shareholders (but for reasons that are in their own best interests) yet still have a strong incentive to maximize the amount received from the sale. If the firm on the other side of the transaction does not have as strong an incentive to maximize, the original firm would experience a positive partner effect.

Therefore, an asset sale may have two components that are assessed by the market. First, the market will assess whether or not the decision to buy or sell an asset is in the best interests of shareholders. In other words, is the firm doing the right thing? If the firm is assessed by the market as doing the right thing, there will be a positive own type effect. Second, the market will assess how effectively the purchase or sale of the asset is likely to be negotiated. That is, the market would assess whether the firm will do things right. Depending upon the ownership structure of the firm on the other side of the transaction (and their relative incentive to do things right), the partner effect may be positive or negative. The market's assessment of whether firms are 'doing the right thing'

and whether they are 'doing things right', based on their ownership structure, will be examined closely in section 5.

The above effects lead to three questions that will be explored:

Q2a: Do the gains from an asset sale result only from the own type effect of the firm?

Q2b: Do the gains from an asset sale result only from a partner effect?

Q2c: Do the gains from an asset sale result from a combination of an own type effect and a partner effect?

The answers to the above three questions will shed light on the nature of the gains or surplus resulting from an asset sale between two firms. The predicted effects for each type of ownership structure are illustrated in Table 1. These predicted effects follow from the literature presented in section 2.

TABLE 1
Predicted Effects on CARs of Own Type and Partner Effects for Large Outside Shareholder, Large Inside Shareholder and Widely Held Firms

Ownership Type	Own Type Effect	Partner Effect
Large Outside Shareholder	+	+
Large Inside Shareholder	?	?
Widely Held	–	–

Ownership Structure Versus Management Signaling

The third theme from the literature is that asset sales are assessed more favorably by the market when the price is disclosed than when it is not. However, disclosing price is at the discretion of management and may not be an accurate signal of the true value of the sale. On the other hand, ownership structure cannot be manipulated by management

in the short term. Therefore, ownership structure may be viewed by the market as a more accurate signal that the transaction is a good one than the disclosure of price. Thus, the research question is:

Q3: Does the market value ownership structure more highly in its assessment of an asset sale than it does management's disclosure of price?

It is predicted that information that is not at the discretion of management will be valued more highly than information which is at the discretion of management.

Now that the research questions have been developed, the methodology and sample used in the study will be discussed.

4. Data and Methodology

The creation of the sample used in the empirical analysis required several time consuming steps and drew upon several data sources. The steps involved are described below.

STEP 1

The first step involved collecting a sample of divestitures, which was found in the Roster of Mergers and Acquisitions appearing in each quarterly issue of *Mergers and Acquisitions*. This roster reports the completed merger and acquisition activity of U.S. firms. Divestiture activity is denoted by a * in the Roster, and the initial sample included all voluntary divestitures (asset sell-offs). The name of the buying and selling firms (or individuals), the asset sold, as well as the price (when mentioned) and terms of the

transaction (when available) were collected. The Roster is organized by the SIC code of the acquired company. To be included in the sample, the asset sold had to be fully owned by the selling company and have a single buyer.

STEP 2

The next step involved taking the sample of divestitures and identifying whether or not the parties on both sides were publicly held companies, because these are the only firms whose performance could be examined using market return data found on the CRSP (Center for Research in Security Prices) tape. At the end of step 2, the data consisted of asset sell-offs, including buying and selling firms, both having market returns available.

STEP 3

Next, an announcement date had to be identified for each asset sell-off. The announcement date used was the earliest public mention of the sale in the *Wall Street Journal*, identified using the *Wall Street Journal Index*. To be included in the sample, the transaction had to: have an announcement date; mention the names of both firms involved and; be free of any confounding events, such as a dividend announcement, around the date of the asset sell-off. By the end of Step 3, the data consisted of asset sell-off transactions with publicly listed corporations (with market returns available around the date of the asset sell-off) on both sides of the transaction, with an announcement date in the *Wall Street Journal*.

STEP 4

The sample then had to be partitioned based on ownership structure. This step was the most problematic since a database had to be found that listed all of the significant

shareholders, their identity and their holdings, of all publicly held corporations in the U.S., on an historical basis. It took over a year to locate and obtain a database which fulfilled these requirements. CDA Investment Technologies Inc. had compiled a database, *Spectrum 5*, which listed all 5% beneficial owners of U.S. publicly held corporations starting in 1980. This database was updated on an annual basis and provided dates of the last transaction of the shareholder, making it possible to identify that the shareholder was present around the announcement date of the asset sale. The sample derived from step 3 was partitioned using this ownership database into large shareholder firms and widely held firms.

STEP 5

From step 4, the firms on both sides of the asset sell-off transaction were broken down into two categories, based upon whether or not there was a large shareholder present. The next step was to identify whether or not the large outside shareholder was an insider or an outsider. As presented in the literature review, there are potentially very different incentives motivating each type. For the purposes of this study, an insider was defined as being a member of the management team, or on the board of directors.

There were two problems concerning inside ownership. The first involved identifying whether or not the large shareholder listed in the *Spectrum 5* database was an insider. The second problem was that a group of insiders could own a large block of shares and not show up in *Spectrum 5* because no individual owned greater than 5% of the outstanding shares. This group can be viewed as a 'large shareholder' because coordination is much easier for insiders than it would be for a group of small outside

shareholders. Two sources were utilized to determine the extent of inside ownership. The *Moody's Handbook* series identified board members and the management team and was used to identify whether the large shareholder (if an individual) was an insider, thus solving the first problem. The second problem was solved by using the *Value Line Investment Survey*, which provides the aggregate shareholdings of management and the board of directors. This was extremely important since a firm could have no listing in *Spectrum 5* and be classified as a widely held firm in a situation where insiders could collectively own a large block of shares. This would lead to different predictions concerning firm performance than for a truly widely held firm.

The firms were then partitioned into three ownership types: large outside shareholder (L), large block inside shareholder (I), and widely held (W). However, in some cases, large inside and large outside shareholders were present in the same firm. In these cases, the firms were classified as L or I based on which shareholder was the largest. For example, if *Spectrum 5* indicated the presence of a 12% outside shareholder and *Value Line* showed a 6% inside block, the firm would be classified as a large block outside shareholder firm (L). In this study, a widely held firm (W) is defined as having no shareholder owning 5% or more of the outstanding stock. The 5% level is important because it is at that level that ownership information becomes public knowledge. Since this study is analyzing whether or not the market's assessment of an asset sell-off is effected by ownership structure, it is necessary for that information to be publicly available.

STEP 6

Once the sample was partitioned by ownership structure, the final step was to group the transactions by ownership type on both sides of the deal. This was necessary because part of the research involves examining whether ownership structure on the other side of the transaction matters. Therefore, the sample of asset sell-offs was divided into matched pairs based on ownership structure on both sides of the transaction. This resulted in the following nine transaction types presented in Table 2:

TABLE 2
Transaction Types

Transaction Type		**Identifying Symbol**
Buying Firm	**Selling Firm**	
Large outside shareholder (L_B)	Large outside shareholder (L_S)	L_B-L_S
Large outside shareholder (L_B)	Widely held firm (W_S)	L_B-W_S
Widely held firm (W_B)	Large outside shareholder (L_S)	W_B-L_S
Widely held firm (W_B)	Widely held firm (W_S)	W_B-W_S
Large inside shareholder (I_B)	Widely held firm (W_S)	I_B-W_S
Widely held firm (W_B)	Large inside shareholder (I_S)	W_B-I_S
Large outside shareholder (L_B)	Large inside shareholder (I_S)	L_B-I_S
Large inside shareholder (I_B)	Large outside shareholder (L_S)	I_B-L_S
Large inside shareholder (I_B)	Large inside shareholder (I_S)	I_B-I_S

For example, the first transaction represents a sample of large block outside shareholder firms (L_B) buying assets from large block outside shareholder firms (L_S), and is denoted by L_B-L_S. The notation for the different transaction types outlined in Table 4.1 will be used throughout the thesis.

Table 3 below gives the distribution of the transactions by year. This is presented to examine whether any transaction type is concentrated in a particular year. The distribution of the matched pairs appears to be similar over years.

TABLE 3
Distribution of Transactions by Year

	L_B-L_S	W_B-L_S	L_B-W_S	W_B-W_S	I_B-W_S	W_B-I_S	L_B-I_S	I_B-L_S	I_B-I_S	Total
1979	1	2	0	1	1	1	2	0	2	10
1980	2	5	1	5	3	5	2	4	5	32
1981	2	2	3	3	5	3	1	2	4	25
1982	3	1	1	3	2	2	2	1	4	19
1983	3	3	3	4	3	1	3	3	4	27
1984	3	3	2	4	2	5	4	4	4	31
1985	7	4	7	7	6	2	3	7	8	51
1986	4	7	8	5	3	1	6	3	6	43
1987	3	4	1	5	3	1	5	4	6	32
1988	3	1	1	5	4	2	1	4	2	23
1989	6	1	5	4	1	2	4	5	6	34
1990	0	0	1	1	0	1	1	0	1	5
Total	37	33	33	47	33	26	34	37	52	332

Methodology

The event study methodology was chosen to answer the research questions. The design of the event study is based on Fama et al. (1969) and Warner, Watts, and Wruck (1988). Using this methodology involved identifying an announcement, or event date, the earliest mention of the asset sell-off in the *Wall Street Journal*. Event periods of

various lengths were set, being centered on the event date. For example, the event date was defined as day T and an event period can be defined as T-2 to T. This represents a three-day event 'window'. The objective was to capture all of the effects on the stock price during this event window. The market model method was used to for this purpose. For each firm j (buyers and sellers), a market model regression was run for the period T-250 to T-50. This regression is of the following form:

$$R_{jt} = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$$

where α_j measures the mean return over the period not explained by the market, β_j measures the sensitivity of firm j to the market, R_{Mt} is the return on the market index and ε_j is a statistical error term. This regression produced estimates of α_j and β_j, which were used to calculate a predicted return over the event period:

$$\hat{R}_{jt} = \hat{\alpha}_j + \hat{\beta}_j R_{Mt}$$

The second step was to measure an abnormal return (AR) for each day in the event window. This is the difference between the actual return on day t and the predicted return. This is calculated from the following:

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

R_{jt} = rate of return on stock j for event day t

The abnormal return was calculated for each day in the event window for each firm. The abnormal return is simply the actual return on that day minus the predicted return. It represents the return that was not predicted and, therefore, caused by the event. The next step was to aggregate the AR_{jt}s over the number of days in the event window. The cumulative abnormal return (CAR_j) for firm j for the event window T_1 to T_2 is:

$$CAR_j = \sum_{t=T_1}^{T_2} AR_{jt}$$

Abnormal returns were averaged across firms to cancel out noise. Therefore, a mean cumulative abnormal return (CAR) for a sample of N firms was:

$$CAR = \frac{\sum_{J=1}^{N} CAR_j}{N}$$

This sample mean cumulative abnormal return represented the average total effect of the event for the sample of firms. Under the hypothesis of no abnormal performance, the expected value of the sample mean cumulative abnormal return is zero.

To test the significance of the CAR, the following procedure was utilized. Each abnormal return AR_{jt} was divided by its estimated standard deviation s_{jt} to produce a standardized prediction error:

$$SAR_{jt} = \frac{AR_{jt}}{s_{jt}}$$

where s_{jt} was calculated from the following:

$$s_{jt} = \left[s_j^2 \left(1 + \frac{1}{200} + \frac{(R_{mt} - \overline{R_m})^2}{\sum_{k=1}^{200} (R_{mk} - \overline{R_m})^2} \right) \right]^{\frac{1}{2}}$$

where:

s_j^2 = residual variance for firm j from the market model regression

R_{mt} = rate of return on the market index for day t of the event period

R_m = average rate of return on the market index over the estimation period

R_{mk} = rate of return on the market index for day k of the estimation period

The standardized cumulative abnormal return for firm j over the event window t= T_1 to T_2 was:

$$SCAR_j = \sum_{t=T_1}^{T_2} \frac{SAR_{jt}}{\sqrt{T_2 - T_1 + 1}}$$

To test the significance of the mean cumulative abnormal return for a sample of N firms the following statistic was calculated:

$$Z = \frac{\sum_{J=1}^{N} SCAR_j}{\sqrt{N}}$$

If the CARs are independent and identically distributed, the test statistic is distributed as Student's t under the hypothesis of no abnormal performance.

A non-parametric test statistic was also used because of the relatively small size of some of the matched pair samples. The test statistic used was the normal approximation to the binomial, and was calculated from the following:

$$z = \frac{x - n\pi}{\sqrt{n\pi(1 - n\pi)}}$$

where n is the sample size, π is the proportion of positive observations expected under the null hypothesis and x is the number of observations that are positive.

A statistic to test for differences in abnormal returns between samples based on ownership structure was also required.[2] For example, to test the significance of the difference between CAR_1 and CAR_2 the following test statistic was utilized:

$$Z_d = \frac{SCAR_1 - SCAR_2}{\sqrt{\frac{1}{N_1} + \frac{1}{N_2}}}$$

[2] This test statistic is adapted from Tehranian, Travlos, and Waegelein (1987).

where

$$SCAR_1 = \frac{\sum_{j=1}^{N} SCAR_{1j}}{N_1}$$

$$SCAR_2 = \frac{\sum_{j=1}^{N} SCAR_{2j}}{N_2}$$

and N_1 and N_2 represent the number of companies in group 1 and group 2.

One of the questions being examined is whether or not the distribution of the surplus between buying and selling firms is affected by ownership structure. To be able to do this the amount of wealth created by the announcement must be calculated for firms on both sides of the transaction. This was calculated from the following:

$$DCAR_j = CAR_j \times MV_j$$

where

$DCAR_j$= dollar cumulative abnormal returns for firm j

CAR_j = cumulative abnormal return for firm j

MV_j = market value of firm j prior to the event window

The average dollar cumulative abnormal return (DCAR) for a sample of N firms was calculated by the following:

$$DCAR = \frac{\sum_{j=1}^{N} DCAR_j}{N}$$

With the sample and methodology clearly defined, the statistical analysis could be done. In the next section, the results from the study are presented.

5. Empirical Results

In this section, results from the event study methodology are used to answer the research questions developed in section 3. The first major research question is addressed in section 5.1 where a summary of the cumulative abnormal returns for the overall and partitioned samples is analyzed. To answer the second set of research questions concerning own type and partner effects, section 5.2 compares the CARs among different matched pair samples. It is broken down into 12 subsections; nine presenting the descriptive statistics and empirical results for each transaction type, and three discussing own type and partner effects, where they apply. Section 5.3 presents a cross-sectional analysis of the CARs, and the results are used to further analyze the first two research questions, as well as to address the third major research question regarding the market's assessment of information.

5.1 Results For Overall and Partitioned Sample

In Table 4 cumulative abnormal returns are presented for the overall buyer and seller samples and then for subsamples partitioned by ownership structure.

TABLE 4
Cumulative Abnormal Returns For Overall And Partitioned Sample

ALL BUYERS (N=332)								
0.232 (Two-day event window CAR) 0.197 (Three-day event window CAR)								
L_B (N=104)			**I_B** (N=122)			**W_B** (N=106)		
1.64** 2.08**			-0.49 -0.56			-0.44* -0.67*		
L_S (37)	**I_S** (34)	**W_S** (33)	**L_S** (37)	**I_S** (52)	**W_S** (33)	**L_S** (33)	**I_S** (26)	**W_S** (47)
1.99** 2.29**	0.44 0.62	2.49** 3.34**	-0.55 -0.32	-0.39 -0.64	-0.57 -0.7	-1.02** -1.43**	-0.07 0.12	-0.31 -0.57
ALL SELLERS (N=332)								
0.49** (Two-day event window CAR) 0.64** (Three-day event window CAR)								
L_S (N=107)			**I_S** (N=112)			**W_S** (N=113)		
2.04** 2.35**			-0.32 -0.22			-0.24 -0.13		
L_B (37)	**I_B** (34)	**W_B** (33)	**L_B** (34)	**I_B** (52)	**W_B** (26)	**L_B** (33)	**I_B** (33)	**W_B** (47)
3.13** 3.94**	1.06* 0.82	1.93** 2.32**	1.24 1.47	-1.50** -1.43**	0.27 0.028	-0.28 -0.13	0.06 -0.102	-0.41 -0.34

* Significant at the 5% level using a two-tailed test.
** Significant at the 1% level using a two-tailed test.

The structure of Table 4 is as follows. For buying and selling firms, the full sample CARs (in percent) are provided for the two- and three-day event windows (the three-day CAR is the number directly below the two-day CAR). Both samples are then partitioned by ownership structure into three types: large outside (L), large inside (I) and widely held (W). The two- and three day CARs are presented in the same fashion as for the overall sample results. Then, each of these subsamples is further partitioned based on the

ownership structure of the firm on the other side of the transaction. These are referred to as the matched pair subsamples. For each of these partitions the sample sizes are presented, and below this, the two- and three-day CARs. The following example will illustrate the structure of the table.

For the full overall sample two- and three-day CARs are presented (the three-day CAR is below the two-day) directly below the heading. The full buyer sample experiences CARs of 0.232% and 0.197% for the two- and three-day windows (neither are significant). Just below these results the subsamples partitioned by ownership structure are presented. For example the results for buying firms with large outside shareholders (denoted by L_B) are presented in the left-hand column. This subsample has significant CARs of 1.64% and 2.08% for the two- and three-day windows. The L_B sample is further partitioned into three subsamples based on the ownership structure of the firm it is dealing with. This results in three matched pair subsamples, which are denoted by L_S, I_S and W_S. The sample size for each is given directly below these designations. For example, the size of the subsample for L_B firms dealing with L_S firms is 37. The row below this shows the CARs for the two-and three-day event windows. The L_B sample, for example, is further partitioned into three subsamples. L_S indicates that the firm on the other side of the deal is a large outside shareholder type. The number in brackets directly below is the sample size, in this case the sample has 37 matched pairs. In this case the buying firm sample experiences significant CARs of 1.99% and 2.29% for the two- and three-day windows.

The results for the three buying firm subsamples (L_B, I_B and W_B) show that there are substantial differences in the CARs and that the results for the large shareholder

sample clearly dominate the others. These results can be used to answer the first research question (Q1) developed in section 3. If ownership structure did not matter, there would be no difference between the CARs of the subsamples and the full buying sample CAR. It is clear from the results that ownership structure does have an effect on the market's assessment of divestitures. The result for the large outside shareholder sample (L_B) is consistent with a monitoring role of the large shareholder. The large inside shareholder sample (I_B) experiences negative CARs for both event windows, neither being significant. The widely held sample experiences negative CARs that are significant for both event windows.

It is necessary to examine whether the CARs of these subsamples differ from each other significantly. In Table 5 these differences (denoted by CAR_D) and their corresponding levels of significance are presented. The CARs for the large outside shareholder sample are significantly greater than both the widely held and large inside shareholder buying subsamples. However, the widely held and large inside shareholder buying firm CARs are not significantly different from each other. These results show that, for buying firms, there are significant differences in the market assessment of the transaction based on differences in ownership structure, with large outside shareholder firms having the highest CAR.

The results for the widely held sample provide evidence that management may be buying an asset for reasons that are not in the best interests of shareholders. The results for the large inside shareholder subsample supports the entrenchment hypothesis over the incentive alignment hypothesis, also implying that the buying decision is not positive for

all shareholders. If the latter hypothesis were true there would be a positive market reaction.

TABLE 5
Differences in CARs Between Subsamples Partitioned by Ownership Structure

BUYING FIRMS	CAR_D	SIGNIFICANCE (Z_D)
Large Outside minus Widely Held		
Two-Day Window	2.08%	4.7263*
Three-Day Window	2.75%	4.9606*
Large Outside minus Large Inside		
Two-Day Window	2.13%	5.045*
Three-Day Window	2.64%	4.8301*
Large Inside minus Widely Held		
Two-Day Window	-0.05%	-0.1541
Three-Day Window	0.11%	0.3054
SELLING FIRMS		
Large Outside minus Widely Held		
Two-Day Window	2.28%	4.0198*
Three-Day Window	2.49%	3.9629*
Large Outside minus Large Inside		
Two-Day Window	2.36%	4.2061*
Three-Day Window	2.58%	4.1679*
Large Inside minus Widely Held		
Two-Day Window	-0.08%	-0.1972
Three-Day Window	-0.09%	-0.2144

* Significant at the 1% level using a two-tailed test.

The results for the overall selling firm sample, presented in Table 4, show that sellers experience positive CARs for both event windows (both significant). The results for the L_S, I_S and W_S subsamples are similar to those of the buying firms, except that the W_S CARs are not significant. These results show that ownership structure matters on the selling side as well. The differences in the CARs (presented in Table 5) for the ownership subsamples are also similar to those found for the buying firms. The large outside shareholder selling firms have significantly greater CARs than the widely held

and the large inside shareholder subsamples. There is no significant difference between the CARs of the widely held and large insider subsamples.

The first question developed in section 3 asked whether there were any differences in announcement effects (CARs) between firms partitioned by ownership structure. The above results show that there are significant differences between samples of firms partitioned by ownership structure for both buyers and sellers. The results are consistent with a monitoring role for large outside shareholders and with an assessment by the market that management in widely held and large inside shareholder firms are not acting in overall shareholder interests. Therefore, not only does ownership structure have an effect, the identity of large owners also has an effect, in this case outsiders and insiders may have very different incentives. This point is illustrated by the following discussion.

It is clear from the results presented in Table 4 and Table 5 that the market assesses asset sell-offs much more favorably for firms with large outside shareholders than those with large inside shareholders or firms that are widely held. The impact of not taking account of the presence of large outside shareholders is illustrated by the results of Hirshey and Zaima (1989). They examined whether or not large inside ownership has any effect on the market assessment of corporate sell-offs (for a more detailed discussion of the paper see the literature review). They divided their sample into large inside and widely held firms and found a two-day CAR of 2.83% (significant) for the large inside shareholder firm sample and a CAR of 0.82% (not significant) for widely held firms. Clearly, they found a very different result for large inside shareholder selling firms than those presented in Table 5.1, where the CARs were negative and not significant for the two event windows. It is possible that Hirshey and Zaima's sample contained a number

of firms with large outside shareholders that were not mentioned in *Value Line*. Hirshey and Zaima's result for widely held firms also differs from those in this thesis, where the CARs are negative (but not significant).

This illustrates the importance of identifying the large shareholder as either an insider or an outsider because they have potentially very different incentives and, therefore, potentially very different effects on firm performance.

The next set of results are from the further partitioning of the sample based on the ownership structure of the firm on the other side of the transaction. This results in a number of matched pair subsamples. This was done in order to examine a number of questions (under Q2 in section 3) involving whether the ownership structure of the firm on the other side of the deal matters. Each of the broadly partitioned subsamples were further partitioned into three categories of matched pairs based on whether they were dealing with a large outside shareholder firm, a firm with a large inside shareholder, or one that is widely held. If there were no effect for the firm under examination from the identity of its partner, the CARs of the matched pair subsamples would not differ from that of the broadly partitioned subsample. For example, the W_B sample has a two-day CAR of -0.44% (significant at the 5% level), but when this sample is further partitioned into W_B firms dealing with I_S firms, the CAR for the partitioned sample is -0.07% (not significant). The results from the matched pair sample show that there are differences in the CARs between the matched pair subsamples. However, this analysis is quite complicated and is presented in the next section.

5.2 Results for Matched Pair Samples

This section addresses the second set of questions (Q2a, Q2b, and Q2c) that were developed in section 3, involving the analysis of matched pairs of buying and selling firms. Empirical results and descriptive statistics are presented for nine matched pair samples. In addition, there are three sections that analyze own type and partner effects for the various ownership structures examined. The three interactions examined are: between large outside shareholder and widely held firms, between large outside shareholder and large inside shareholder firms, and between widely held and large inside shareholder firms. For example, the first four matched pair samples that are presented are: L_B-L_S, W_B-W_S, L_B-W_S and W_B-L_S. A section discussing own type and partner effects between large outside shareholder and widely held firms follows. The same structure is used for the other ownership types.

5.2.1 Results for L_B-L_S Transaction

In Table 6 below sample characteristics are presented for the large outside shareholder firms dealing with large outside shareholder firms. The first row indicates the sample size, and the second row the average price paid for the asset. The row below this shows the number of transactions where the price was disclosed in the initial announcement. For both buyer and sellers the average and median market value is presented. The market value is calculated as the product of the stock price prior to the event period and the outstanding shares. The average and median holdings of the outside and inside shareholders are also presented for buyers and sellers.

TABLE 6
Descriptive Statistics For Large Outside Shareholder Firms Buying From Large Outside Shareholder Firms

Sample size = 37	
Average price of the transaction = $190.8M	
Number of transactions where price was disclosed = 23	
Large Outside Shareholder Buyer	
Average Market Value	$2.17B
Median Market Value	$983M
Average % Holding of Large Outside Shareholder	16.54%
Median % Holding of Large Outside Shareholder	9.9%
Average % Holding of Inside Shareholder	5.9%
Median % Holding of Inside Shareholder	2%
Large Outside Shareholder Seller	
Average Market Value	$1.69B
Median Market Value	$1.08B
Average % Holding of Large Outside Shareholder	11%
Median % Holding of Large Outside Shareholder	8.1%
Average % Holding of Inside Shareholder	2.79%
Median % Holding of Inside Shareholder	1.7%

In Table 7 the event study results are presented for the matched pair sample. The structure of the table is as follows. Moving from left to right, the CAR for the two- and three day windows are shown in the second column. Next, the median CAR is shown. In the next column is the significance of the CAR and beside this is the number of positive individual CARs. In the last column a test statistic, calculated from the normal approximation to the binomial, is presented. Below this section of the table the differences in CARs between the buying and selling firms are presented, as well their significance.

TABLE 7
Cumulative Abnormal Returns For Large Outside Shareholder Firms Buying From Large Outside Shareholder Firms (Sample size = 37)

Large Outside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	1.99%	1.82%	5.199*	31	4.111*
Three-Day	2.29%	1.59%	4.69*	28	3.124*
Large Outside Sellers					
Two-Day	3.13%	1.73%	6.88*	30	3.7817*
Three-Day	3.94%	4%	7.01*	30	3.7817*

Differences Between Seller and Buyer CARs (L_S minus L_B)		
	CAR_D	Z_D
Two-Day	1.14%	1.199
Three-Day	1.65%	1.6605

* Significant at the 1% level using a two-tailed test

For the two-day event window excess returns for the buying firms are 1.99% with a z-statistic of 5.199. The selling firm sample has an excess return of 3.13% with a z-statistic of 6.88. The excess returns for both sides of the transaction are significant. The results are similar for the three-day window. The buying firm sample has a CAR of 2.29% with a z-statistic of 4.69. The selling firm sample has a CAR of 3.94% with a z-statistic of 7.01. The CARs on both sides of the transaction are significant. The non-parametric z-statistic also shows that the CARs are significantly positive. Even though the selling firm CARs are greater those of the buying firm sample, the results from Table 7 indicate that this difference is not significant. Overall, the above results point to a strong positive effect for both buying and selling large block outside shareholder firms in this matched pair. However, any indication of ownership structure on the other side of the transaction having any effect (on the CAR), will only be shown by comparing the above results to transactions involving other ownership structures. This will be done as the results from

other transaction types are presented. One interesting point is that the CARs are higher than those reported in other work on divestitures.[3]

5.2.2 Results for W_B - W_S Transaction

In this section the empirical results are presented for the widely held buyer-widely held seller matched pair. From Table 8 it is clear that the size of the widely held firms is greater than for the large shareholder firms given in the last section. The median value for the widely held buying sample, however, suggests that a few very large firms are pulling the average up.

TABLE 8
Descriptive Statistics For Widely Held Firms Buying From Widely Held Firms

Sample size = 47	
Average price of the transaction = $198.8M	
Number of transactions where price was disclosed = 23	
Widely Held Buyer	
Average Market Value	$7.08B
Median Market Value	$3.65B
Average % Holding of Inside Shareholder	1%
Median % Holding of Inside Shareholder	1%
Widely Held Seller	
Average Market Value	$3.92B
Median Market Value	$2.44B
Average % Holding of Inside Shareholder	1.14%
Median % Holding of Inside Shareholder	1%

The CARs, presented in Table 9, are negative, but not significant, for both event windows. The non-parametric z-statistic shows that only the two-day CAR is significant. These results stand in stark contrast to those of the L_B-L_S transaction, where the excess returns were positive and significant. This adds support for the hypothesis that firms with

[3] For example Sicherman and Pettway (1992) report two-day CARs of 0.92% for sellers and 0.50% for

large outside shareholders will experience a greater announcement effect than widely held firms.

There is also an overall positive surplus created from the L_B-L_S transaction (from the previous section) compared to a negative, but insignificant, surplus from the W_B-W_S transaction. These preliminary results suggest that value is being created from the transaction when large firms are involved, rather than gains being made at the expense of the firm on the other side of the transaction. Therefore, the transaction is a positive sum rather than zero-sum. This issue is discussed in much greater detail in the section on own type and partner effects between L and W firms.

TABLE 9
Cumulative Abnormal Returns For Widely Held Firms Buying From Widely Held Firms (Sample size = 47)

Widely Held Buyer	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-0.31%	-0.07%	-0.691	22	0.4376
Three-Day	-0.57%	-1.29%	-1.29	17	1.8963*
Widely Held Sellers					
Two-Day	-0.41%	-0.45%	-1.262	18	1.6045
Three-Day	-0.34%	-0.58%	-0.7033	19	1.3128
Differences Between Buyer and Seller CARs (W_S-W_B)					
		CAR_D		**Z_D**	
Two-Day		0.10%		0.4037	
Three-Day		0.23%		0.4134	

*Significant at the 5% level using a one-tailed test.

buyers, both being significant.

5.2.2 Results for L_B-W_S Transaction

Up to this point, transactions involving firms with the same type of ownership structure on both sides have been examined. In this section, results for large outside shareholder firms buying assets from widely held firms are presented.

TABLE 10
Descriptive Statistics For Large Outside Shareholder Firms Buying From Widely Held Firms

Sample size = 33	
Average price of the transaction = $281.13M	
Number of transactions where price was disclosed = 15	
Large Outside Shareholder Buyer	
Average Market Value	$2.41B
Median Market Value	$750M
Average % Holding of Large Outside Shareholder	10.33%
Median % Holding of Large Outside Shareholder	8%
Average % Holding of Inside Shareholder	4.3%
Median % Holding of Inside Shareholder	3%
Widely Held Seller	
Average Market Value	$7.14B
Median Market Value	$2.81B
Average % Holding of Inside Shareholder	1.7%
Median % Holding of Inside Shareholder	1%

The average market value of the widely held selling sample, presented in Table 10, is larger than that of the large outside shareholder buying firm. However, a t-test for a difference in the means gives a t-statistic of 1.6731 (p-value=.10406), implying that the two samples are not significantly different from each other in average market value.

The CARs for the L_B sample are positive and significant for both event windows. The non-parametric z-statistic is also highly significant. The widely held selling firm sample on the other hand experiences negative CARs which are not significant for both event windows. The non-parametric z is consistent with these results.

TABLE 11
Cumulative Abnormal Returns For Large Outside Shareholder Firms Buying From Widely Held Firms (Sample size = 33)

Large Outside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	2.49%	1.91%	5.99*	28	4.004*
Three-Day	3.34%	2.46%	6.6779*	30	4.700*
Widely Held Sellers					
Two-Day	-0.28%	-0.70%	-0.6748	13	1.2185
Three-Day	-0.13%	-0.06%	-0.5340	14	0.8704
Differences Between Buyer and Seller CARs (L_B-W_S)					
		CAR_D		Z_D	
Two-Day		2.77%		4.71*	
Three-Day		3.47%		5.099*	

* Significant at the 1% level using a two-tailed test

The difference in the CARs between the two samples is also significant. Therefore, the large outside shareholder firms do significantly better than the widely held selling firm sample for both event windows. What is interesting is that past research on asset sell-offs had found that abnormal returns for selling firms were generally greater than those of buying firms. The above results show that this is not the case, with the buying firm CARs significantly greater than those of the selling firm. Therefore, the pattern of CARs appears to be depend more on the ownership structure of the firm rather than whether they are a buyer or a seller.

5.2.3 Results for W_B-L_S Transaction

In this section, results for the matched pair sample of widely held firms buying from large outside shareholder firms are presented. The descriptive statistics for the buying and selling firm samples are presented below in Table 12. One statistic that is

immediately obvious is the size (given by market value) of the widely held sample compared to the large outside shareholder sample. The difference between the average market values of the two is significant, the t-test generating a statistic of 2.64477 (with a corresponding p-value of 0.01256).

TABLE 12
Descriptive Statistics For Widely Held Firms Buying From Large Outside Shareholder Firms

Sample size = 33	
Average price of the transaction = $184.36M	
Number of transactions where price was disclosed = 14	
Widely Held Buyer (W_B)	
Average Market Value	$6.27B
Median Market Value	$3B
Average % Holding of Inside Shareholder	1.46
Median % Holding of Inside Shareholder	1%
Large Outside Shareholder Seller (L_S)	
Average Market Value	$1.61B
Median Market Value	$936M
Average % Holding of Large Outside Shareholder	13.63%
Median % Holding of Large Outside Shareholder	10.4%
Average % Holding of Inside Shareholder	4.1%
Median % Holding of Inside Shareholder	1.9%

The CARs for the W_B (presented in Table 13) sample are negative and significant for both event windows. This is the first time (in this thesis) that any of the widely held samples have had significant CARs. Also, despite the fact that there is a significant difference in the size of the samples, the widely held sample still experiences significant negative effects. Therefore, the size differential does not appear to be driving the results. The values of the non-parametric z are also significant for both event windows. The CARs for the large outside shareholder selling firm sample are positive and significant for both event windows. This continues the pattern of positive effects for large outside

shareholder firm that have been observed so far. The difference in the CARs between the two samples is also significant for both event windows (as shown in Table 13).

TABLE 13
Cumulative Abnormal Returns For Widely Held Firms Buying From Large Outside Shareholder Firms (Sample size = 33)

Widely Held Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-1.02%	-1.25%	-2.8469*	10	2.263**
Three-Day	-1.43%	-1.15%	-3.38*	9	2.6111***
Large Outside Sellers					
Two-Day	1.93%	1.4%	3.7362*	25	2.9593***
Three-Day	2.32%	1.4%	3.9814*	22	1.9148**
Differences Between Buyer and Seller CARs (L_S-W_B)					
		CAR_D		Z_D	
Two-Day		2.95%		4.6547*	
Three-Day		3.75%		5.2064*	

* Significant at the 1% level using a two-tailed test
**Significant at the 5% level using a one-tailed test
***Significant at the 1% level using a one-tailed test

Comparing these results to the last transaction (L_B-W_S), it is interesting to note that the value of the CARs flip over as the large outside shareholder moves from one side of the deal to the other. These results provide further support for a value-increasing role for large outside shareholders. It also appears that widely held buying firms may do worse when dealing with large outside shareholder firms than with other widely held firms. This will be analyzed in more detail in the next section.

5.2.4 Own Type and Partner Effects for Large Outside Shareholder and Widely Held Firms

To examine the own type and partner effects discussed in section 3, it is necessary to compare the abnormal returns and dollar abnormal returns across different transaction

types. In Table 14 below, abnormal returns and dollar abnormal returns are presented for the four transactions examined so far. The results are presented in such a way so as to make comparisons easier across different transactions.

TABLE 14
CARs and DCARs for Four Transactions

	L_B-L_S		W_B-W_S		L_B-W_S		W_B-L_S	
	Two-Day Event Window							
CAR	1.99%*	3.13%*	-0.31%	-0.41%	2.49%*	-0.28%	-1.02%*	1.93%*
DCAR	33,005,473	42,319,909	17,444,178	79,434	25,336,226	3,669,144	$-2.4x10^7$	12,121,838
MED	13,140,662	17,734,000	-1,760,972	-3,240,058	10,575,918	$-1.1x10^7$	$-2.5x10^7$	14,545,750
	Three-Day Event Window							
CAR	2.29%*	3.94%*	-0.57%	-0.34%	3.34%*	-0.13%	-1.43%*	2.32%*
DCAR	35,500,036	51,107,308	3,730,272	3,501,606	32,295,147	$-2.6x10^7$	$-7x10^7$	18,361,644
MED	11,198,760	21,632,000	$-1.1x10^7$	-6,336,113	17,716,617	-1,327,384	$-4.7x10^7$	10,750,343

*Significant at the 1% level using a two-tailed test

Three statistics are presented for each transaction and for both the two- and three-day event windows. These are the CARs (cumulative abnormal returns), the DCARs (average dollar cumulative abnormal returns), and the median $DCAR_i$ (denoted by MED in Table 14).

The presence of an own type effect can be found by comparing the abnormal returns of the L_B-L_S and W_B-W_S transactions. An own type effect has to do with the effect on performance of a firm's ownership structure on one side of the transaction. In this case the own type effect is that the presence of large block outside shareholders will lead to a higher market reaction than the presence of a widely held firm. The partner effect hypothesizes that the ownership structure on the other side of the transaction may affect the abnormal return for the firm under examination (a partner effect is hypothesized not to be a factor when firms with identical ownership structures are dealing with each other).

TABLE 15
Transaction Differences for Large Outside Shareholder and Widely Held Firms

TRANSACTION DIFFERENCE	CAR_D (%)	Z_D
$[L_B\|L_B{:}L_S]$ - $[W_B\|W_B{:}W_S]$		
Two-Day	2.30	4.3465*
Three-Day	2.86	4.3602*
$[L_S\|L_B{:}L_S]$ - $[W_S\|W_B{:}W_S]$		
Two-Day	3.52	5.9803*
Three-Day	4.28	5.7097*
$[L_B\|L_B{:}W_S]$ - $[L_B\|L_B{:}L_S]$		
Two-Day	0.50	0.7832
Three-Day	1.05	1.6373
$[W_S\|L_B{:}W_S]$ - $[W_S\|W_B{:}W_S]$		
Two-Day	0.13	0.2933
Three-Day	0.21	0.0424
$[L_S\|L_B{:}L_S]$ - $[L_S\|W_B{:}L_S]$		
Two-Day	1.20	2.0051**
Three-Day	1.62	1.9185
$[W_B\|W_B{:}W_S]$ - $[W_B\|W_B{:}L_S]$		
Two-Day	0.86	1.7384
Three-Day	0.71	2.1486**

*Significant at the 1% level using a two-tailed test
**Significant at the 5% level using a two-tailed test

The differences in abnormal returns utilized in this analysis are presented in Table 15. The results in Table 15 represent the differences in CARs (denoted by CAR_D) and their significance (denoted by Z_D) across different transactions. For example, the first difference presented, $[L_B|L_B{:}L_S]$ - $[W_B|W_B{:}W_S]$, represents the difference in CARs between the large outside shareholder sample from the L_B-L_S transaction and the widely held buying sample from the W_B-W_S transaction.

The first two differences in Table 15 are used to test for an own type effect. The first difference, $[L_B|L_B{:}L_S]$ - $[W_B|W_B{:}W_S]$, shows that large outside shareholder buying firms have significantly greater CARs for both event windows than do widely held buying firms. This provides strong support for a positive own type effect for the presence

of large outside shareholders in buying firms. If ownership structure did not matter, we would expect there to be no significant difference between the two.

The result is similar for large outside shareholder selling firms given in the next difference, $[L_S|L_B:L_S] - [W_S|W_B:W_S]$. The L_S sample CARs are significantly greater than those of the W_S sample when they are dealing with their own type for both event windows.

The above results also answer a question concerning the nature of the surplus created by the transaction. Firms on both sides of the L_B-L_S transaction experience significantly greater returns than their widely held counterparts in the W_B-W_S transaction (as shown above). If large outside shareholder firms only gain when they are dealing with widely held firms (a question that is examined below) there would no wealth created when another large outside shareholder firm is on the other side of the transaction. The fact that there are significant positive CARs for both buying and selling firms in the L_B-L_S matched pair shows that there is there is an overall increase in wealth created by the transaction. Therefore, positive gains experienced by large outside shareholder firms are not just at the expense of widely held firms, as shown by the existence of an own type effect.

The presence of a partner effect is tested for by making four comparisons. This involves examining whether or not there is a any difference in the CARs of one type of firm, while varying the ownership structure on the other side of the transaction. The first test examines the difference between CARs for large outside shareholder firms (L_B) between the L_B-L_S and L_B-W_S transactions ($[L_B|L_B:W_S] - [L_B|L_B:L_S]$ in Table 15). The hypothesized partner effect for the L_B-W_S transaction is that the L_B sample will have an

additional positive impact (in addition to the own type effect) because they are dealing with widely held firms. The motivation for this was presented in section 3. If there is a partner effect, then the CARs for the L_B sample for the L_B-W_S transaction will be greater than the L_B CARs from the L_B-L_S transaction. For the two- and three-day windows, the difference between the CARs are not significant. Therefore, there does not appear to be a partner effect for L_B firms when dealing with W_S firms.

The second test for a partner effect involves comparing CARs for the W_S samples between the L_B-W_S and W_B-W_S transactions ($[W_S|L_B:W_S]$ - $[W_S|W_B:W_S]$ in Table 15). The hypothesized partner effect implies that W_S firms from the L_B-W_S transaction will have a lower CAR than that resulting from the W_B-W_S transaction. Since none of the CAR_Ds are significant (from Table 15), there does not appear to be a partner effect.

A third test involved comparing CARs for L_S firms between the L_B-L_S and W_B-L_S transactions (designated by $[L_S|L_B:L_S]$ - $[L_S|W_B:L_S]$ in Table 15). The CARs for the L_S sample from the W_B-L_S transaction are less than those from the L_B-L_S transaction. The difference is significant for the two-day window and not significant for the three-day window. This suggests that there is a negative partner effect for large outside shareholder firms selling assets to widely held firms.

The last test for a partner effect in this section involves comparing the CARs of the W_B samples from the W_B-W_S and W_B-L_S transactions (the last difference presented in Table 15). The CAR_D is significant for the three-day window, showing that widely held buying firms do worse when dealing with large outside shareholder firms than when widely held firms are on the other side of the transaction. The results support a partner effect in this transaction.

These results shed some light on the question concerning the nature of the gains (or losses) resulting from an asset sale between firms. There appears to be a strong own type effect, as firms with large outside shareholders have significantly higher CARs than widely held firms. The results concerning the existence of a partner effect show that large outside shareholder firms actually do worse (on the selling side of the transaction) when dealing with widely held firms than with other large outside shareholder firms. This is the opposite result that expected from the discussion in section 3, where large outside shareholder firms were expected to benefit at the expense of widely held firms. This result does provide support for the idea that, even though a transaction may be undertaken by management for reasons that are not in the best interests of shareholders, management may still have an incentive to negotiate a good price.

In summary, there is strong support for an own type effect regarding the presence of large block outside shareholders. The evidence for a partner effect is mixed. There is no partner effect apparent for selling firms, however, there appears to be an effect for buying firms. Large outside shareholder firms do worse when buying from widely held firms than from other large outside shareholder firms. Widely held firms buying firms have significantly lower CARs when dealing with large outside shareholder firms.

The next series of transactions presented involve large block inside shareholder firms. An analysis of own type and partner effects between large block outside shareholder firms and large block inside shareholder firms will follow.

5.2.5 Results for the I_B-L_S Transaction

In this section large inside shareholder firms are introduced in the matched pair analysis. Descriptive statistics for large inside shareholder firms buying assets from large outside shareholder firms are presented in Table 16.

TABLE 16
Descriptive Statistics For Large Inside Shareholder Firms Buying From Large Outside Shareholder Firms

Sample size = 37	
Average price of the transaction = $142.3M	
Number of transactions where price was disclosed = 19	
Large Inside Shareholder Buyer (I_B)	
Average Market Value	$1.77B
Median Market Value	$528M
Average % Holding of Inside Shareholder	22.29
Median % Holding of Inside Shareholder	19
Average % Holding of Large Outside Shareholder	1.6
Median % Holding of Large Outside Shareholder	0
Large Outside Shareholder Seller (L_S)	
Average Market Value	$1.4B
Median Market Value	$1.08B
Average % Holding of Large Outside Shareholder	13.26
Median % Holding of Large Outside Shareholder	9.84
Average % Holding of Inside Shareholder	2.05
Median % Holding of Inside Shareholder	1.6

The average market values of the two are similar in size, as compared to the matched pairs involving widely held firms. The difference in market values is not significant, having a t-statistic of 0.87829 with a corresponding p-value of 0.3885.

Cumulative abnormal returns are presented in Table 17 below. The large inside buying firm sample experiences negative CARs for both event windows, neither significant. The large outside shareholder selling firms have positive CARs for both event windows, however, only the two-day abnormal return is significant. The non-parametric z-statistic implies that the CAR is significant for both event windows, but only

at the 10% level. This is the first time (of the transactions examined so far) that a large outside shareholder subsample has a CAR that is not significant. Thus, the presence of a large inside shareholder firm on the other side of the transaction may have a negative impact on the large outside shareholder firm CAR. This question is examined in greater detail in the section discussing own type and partner effects between I and L type firms.

TABLE 17
Cumulative Abnormal Returns For Large Inside Shareholder Firms Buying From Large Outside Shareholder Firms (Sample size = 37)

Large Inside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-0.55%	-1.13%	-1.2953	16	0.8220
Three-Day	-0.32%	-1.06%	-0.9152	15	1.1508
Large Outside Sellers					
Two-Day	1.06%	0.98%	2.1381*	23	1.4796**
Three-Day	0.82%	1.05%	1.7183	23	1.4796**
Differences Between Buyer and Seller CARs (I_S-L_B)					
	CAR_D		**Z_D**		
Two-Day	1.61%		2.4277*		
Three-Day	1.14%		1.8622		

*Significant at the 5% level using a two-tailed test
**Significant at the 10% level using a one-tailed test

The difference in CARs between the buying and selling firms (CAR_D) is significant only for the two-day window. Given that there is no difference between the average market values of the two sides of the matched pair, the fact that there are differences in the CARs suggests that firm size is not a significant factor. The results suggest that large outside shareholder firms perform better than large inside shareholder firms.

5.2.6 Results for the L_B-I_S Transaction

In this section empirical results are presented for large outside shareholder firms buying from large inside shareholder firms. Descriptive statistics for the two sides

presented in Table 18 As was the case for the matched pair in the last section, the difference in the average market values between the two sides of the transaction is not significant, having a t-statistic of 0.9801 (with a corresponding p-value of 0.3342).

TABLE 18
Descriptive Statistics For Large Outside Shareholder Firms Buying From Large Inside Shareholder Firms

Sample size = 34	
Average price of the transaction = $117.2M	
Number of transactions where price was disclosed = 21	
Large Outside Shareholder Buyer (L_B)	
Average Market Value	$2.68B
Median Market Value	$1.62B
Average % Holding of Outside Shareholder	11.7
Median % Holding of Outside Shareholder	6.95
Average % Holding of Large Inside Shareholder	2.38
Median % Holding of Large Inside Shareholder	1
Large Inside Shareholder Seller (I_S)	
Average Market Value	$3.67B
Median Market Value	$1.73B
Average % Holding of Large Inside Shareholder	24.12
Median % Holding of Large Inside Shareholder	21.09
Average % Holding of Outside Shareholder	2.6
Median % Holding of Outside Shareholder	0

The CARs for the buying and selling firm samples are presented below in Table 19. The CARs for the large outside shareholder buying firm sample are not significant for either event window (as indicated by the z-statistic). However, the non-parametric z-statistic show that both CARs are significant. These results are similar to those for the large outside shareholder sample from the last transaction, except in this case neither of the CARs are significant. This adds more evidence to a negative effect for large outside shareholder firms when dealing with large inside shareholder firms.

TABLE 19
Cumulative Abnormal Returns For Large Outside Shareholder Firms Buying From Large Inside Shareholder Firms (Sample size = 34)

Large Outside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	0.44%	0.81%	1.5034	22	1.7150*
Three-Day	0.62%	0.96%	1.2664	23	2.0580*
Large Inside Sellers					
Two-Day	1.24%	-0.14%	0.9941	15	0.6890
Three-Day	1.47%	0.18%	1.3393	20	1.0290
Differences Between Buyer and Seller CARs (L_S-I_B)					
		CAR_D		**Z_D**	
Two-Day		0.80%		0.3705	
Three-Day		0.85%		0.0613	

*Significant at the 5% level using a one-tailed test

The CARs for the large insider selling firm sample are positive but not significant for both event windows. The CARs for the large outside shareholder firm sample are also positive and not significant for both event windows. This is the first transaction in which this is the case where L type firms are involved. The presence of I type firms on the other side of the transaction again appears to have a negative effect.

5.2.7 Results for the I_B-I_S Transaction

In this section the matched pair of large inside shareholder firms on both sides is examined. Descriptive statistics for both sides of the matched pair are presented in Table20. Following the pattern of the last two sections, there is not a significant difference between the average market values of the two sides (the t-statistic from this test is 1.8270, with a corresponding p-value of 0.07360).

TABLE 20
Descriptive Statistics For Large Inside Shareholder Firms Buying From Large Inside Shareholder Firms

Sample size = 52	
Average price of the transaction = $217.96M	
Number of transactions where price was disclosed = 26	
Large Inside Shareholder Buyer (I_B)	
Average Market Value	$2.13B
Median Market Value	$777M
Average % Holding of Large Inside Shareholder	22.4
Median % Holding of Large Inside Shareholder	17
Average % Holding of Outside Shareholder	2.11
Median % Holding of Outside Shareholder	0
Large Inside Shareholder Seller (I_S)	
Average Market Value	$1.27B
Median Market Value	$1.06B
Average % Holding of Large Inside Shareholder	21.61
Median % Holding of Large Inside Shareholder	17
Average % Holding of Outside Shareholder	3.21
Median % Holding of Outside Shareholder	0

The CARs for the transaction are presented in Table 21 below. CARs for the buying sample are negative, but not significant (from the z-statistic), for both event windows. However, the non-parametric z-statistic shows that the three-day CAR is significant. The CARs for the selling firm sample are negative, and significant, for both event windows. This result is opposite to that found in the last section, where the large inside shareholder selling sample had positive CARs for both event windows. It appears that large inside shareholder selling firms benefit from dealing with large outside shareholder buyers compared to when they are dealing with other large inside shareholder firms. This question is analyzed in greater detail in the next section on own type and partner effects. A more detailed analysis of this question is presented in the next section.

TABLE 21
Cumulative Abnormal Returns For Large Inside Shareholder Firms Buying From Large Inside Shareholder Firms (Sample size = 52)

Large Inside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-0.39%	-0.36%	-1.8550	23	0.8320
Three-Day	-0.64%	-0.92%	-1.3685	19	1.9414***
Large Inside Sellers					
Two-Day	-1.50%	-1.04%	-3.127*	15	3.0508**
Three-Day	-1.43%	-0.67%	-2.72*	17	2.4961**
Differences Between Buyer and Seller CARs (I_S-I_B)					
	CAR_D		**Z_D**		
Two-Day	1.1%		0.8999		
Three-Day	0.79%		0.9580		

*Significant at the 1% level using a two-tailed test
**Significant at the 1% level using a one-tailed test
***Significant at the 5% level using a one-tailed test

5.2.8 Own Type and Partner Effects For Large Outside and Large Inside Shareholder Firms

In this section, own type and partner effects are examined for large inside and large outside shareholder firms. Table 22 gives a summary of the CARs for the four transactions utilized for analysis, as well as DCARs and the median $DCAR_i$ for each transaction.

TABLE 22
CARs and DCARs for Four Transactions

	L_B-L_S		I_B-I_S		L_B-I_S		I_B-L_S	
	Two-Day Event Window							
CAR	1.99%*	3.13%*	-0.39%	-1.50%*	0.44%	1.24%	-0.55%	1.06%**
DCAR	33,005,473	42,319,909	-6,080,235	$-1.3x10^7$	19,678,311	$-1.1x10^7$	$-1.5x10^7$	17,467,197
MED	13,140,662	17,734,000	-311,341	-3,114,478	10,252,620	-2,581,924	-3,743,907	6,088,056
	Three-Day Event Window							
CAR	2.29%*	3.94%*	-0.64%	-1.43%*	0.62%	1.47%	-0.324%	0.82%
DCAR	35,500,036	51,107,308	2,936,601	$-2.0x10^7$	27,487,302	$-1.9x10^7$	-2,924,433	12,674,998
MED	11,198,760	21,632,000	-2,395,274	-1,790,396	17,661,540	5,727,900	-4,433,159	6,065,128

*Significant at the 1% level using a two-tailed test
**Significant at the 5% level using a two-tailed test

Own type and partner effects are examined by comparing CARs across different transactions. The six differences utilized in this analysis are shown in Table 23 below. The first two are used to examine own type effects and the remaining four to examine partner effects. The first column lists the difference between the transactions that are analyzed. The second column presents the difference in CARs (denoted by CAR_D) and the third column shows the significance of the difference (Z_D).

The first own type effect examined is for large outside and large inside buying firms dealing with their own type (represented by $[L_B|L_B:L_S] - [I_B|I_B:I_S]$). It is assumed that there are no partner effects firms with the same ownership structure are dealing with each other.

TABLE 23
Transaction Differences for Large Outside and Large Inside Shareholder Firms

TRANSACTION DIFFERENCE	CAR_D (%)	Z_D
$[L_B\|L_B:L_S] - [I_B\|I_B:I_S]$		
Two-Day	1.48	5.1689*
Three-Day	2.93	4.4645*
$[L_S\|L_B:L_S] - [I_S\|I_B:I_S]$		
Two-Day	4.63	7.2716*
Three-Day	5.37	7.1134*
$[L_B\|L_B:L_S] - [L_B\|L_B:I_S]$		
Two-Day	1.54	2.5127**
Three-Day	1.67	2.3311**
$[L_S\|L_B:L_S] - [L_S\|I_B:L_S]$		
Two-Day	2.07	3.3517*
Three-Day	3.1	3.7431*
$[I_S\|I_B:I_S] - [I_S\|L_B:I_S]$		
Two-Day	-2.74	-2.72*
Three-Day	-2.9	-2.73*
$[I_B\|I_B:I_S] - [I_B\|I_B:L_S]$		
Two-Day	-0.16	-0.2004
Three-Day	-0.56	-0.1182

*Significant at the 1% level using a two-tailed test
**Significant at the 5% level using a two-tailed test

The CAR_D is positive and significant for both event windows. This result shows that large shareholder buying firms experience a significantly greater CAR than do large inside shareholder firms when both are dealing with their own type.

The own type effect for large inside and large outside shareholder selling firms (denoted by $[L_S|L_B{:}L_S] - [I_S|I_B{:}I_S]$) shows similar results to those for the buying firms, the CAR_Ds being positive and significant for both event windows. Thus, the large outside shareholder selling firms do significantly better than large inside shareholder selling firms when dealing with their own type.

The above results are consistent with the market assessing that firms with large outside shareholders are making decisions to buy and sell assets that are in the best interests of shareholders (when dealing with their own type). These results also show that large inside shareholder firms buying and selling assets are assessed much less favorably than large outside shareholder firms, implying that the decision to buy or sell is not in the interests of shareholders for large inside shareholder firms (dealing with their own type).

The next four transaction differences are used to examine partner effects for L and I type firms. The first partner effect examined is for the $[L_B|L_B{:}L_S] - [L_B|L_B{:}I_S]$ difference. The idea here is to examine whether not there is any effect on the performance of large outside buying firms from dealing with large inside shareholder firms. The CAR_Ds show that large outside shareholder firms do significantly worse when buying from large inside shareholder firms then when dealing with their own type, for both event windows. The partner effect in this case is a negative one.

The next partner effect examines whether or not there is any difference in the performance of large outside shareholder selling firms when dealing with large inside shareholder firms. This difference is denoted by $[L_S|L_B:L_S]$ - $[L_S|I_B:L_S]$ in Table 23. The results show that large shareholder forms do significantly better selling to other large outside shareholder firms than to large inside shareholder firms. Therefore, there is a negative partner effect for L_S firms from dealing with I_B firms. This result is similar to that found above for large outside shareholder firms buying from large inside shareholder firms.

The next partner effect involves comparing the CARs for large inside selling firms between dealing with other large inside shareholder firms and selling to large outside shareholder firms (denoted by $[I_S|I_B:I_S]$ - $[I_S|L_B:I_S]$ in Table23). The results show that I_S firms do significantly better when dealing with large outside shareholder buyers than they do when selling to other large inside shareholder firms. The CAR_Ds are significant for both event windows. There is a negative partner effect for large inside shareholders from dealing with other large inside shareholder firms.

The last partner effect examines the difference in performance for large inside shareholder firms between the $I_B:L_S$ and $I_B:I_S$ transactions ($[I_B|I_B:I_S]$ - $[I_B|I_B:L_S]$ in Table 23). The difference between the CAR_Ds are not significant for both event windows. Therefore, for large inside shareholder buying firms, there is no partner effect from dealing with a large outside shareholder firm compared to a large inside shareholder firm.

These results point to a positive own type effect for large outside shareholder firms (when dealing with their own type) compared to a negative own type effect for large inside shareholder firms (when dealing with their own type) on both the buying and

selling sides. What is very interesting is that there is a significant negative partner effect on large outside shareholder firms from dealing with large inside shareholder firms (compared to when they are dealing with other large outside shareholder firms). These results are consistent with large inside shareholder firms making decisions to buy (or sell) an asset that is assessed negatively by the market, but negotiating for as good a price as possible, which may negatively effect the market's assessment of the large outside shareholder firm (partner effect). In fact, the large inside shareholder firms may be negotiating harder than the large outside shareholder firms, as evidenced by the lower returns for the latter type when dealing with the former. This is consistent with the idea presented in section 3 that, even though large inside shareholders decision to buy (or sell) an asset has a negative impact on the value of their firm, they may have an incentive to negotiate as good as price as they can, resulting in a lower return for the firm on the other side of the transaction. The fifth difference in Table 23 provides evidence for this point, showing that large inside shareholder firms do better when selling to large outside shareholder firms than to large inside shareholder firms. Large inside buying firms also better when dealing with large outside shareholder firms, however, the difference is not significant.

5.2.9 Results for I_B-W_S Transaction

This section presents the results for the large inside shareholder firm buying from a widely held firm matched pair. The descriptive statistics the samples on each side of the transaction are presented in Table 24 below. The average market value of the widely held sample appears to be substantially greater than that of the large inside shareholder

sample. The difference between the average market values is significant, with a t-statistic of 3.4652 (with a corresponding p-value of 0.0015).

TABLE 24
Descriptive Statistics For Large Inside Shareholder Firms Buying From Widely Held Firms

Sample size = 33	
Average price of the transaction = $111.5M	
Number of transactions where price was disclosed = 18	
Large Inside Shareholder Buyer (I_B)	
Average Market Value	$2.6B
Median Market Value	$868M
Average % Holding of Large Inside Shareholder	18.91
Median % Holding of Large Inside Shareholder	12.2
Average % Holding of Outside Shareholder	1.58
Median % Holding of Outside Shareholder	0
Widely Held Seller (W_S)	
Average Market Value	$10.3B
Median Market Value	$4.7B
Average % Holding of Inside Shareholder	1.29
Median % Holding of Inside Shareholder	0

The CARs for the transaction are given in Table 25 below. The abnormal returns for the large inside shareholder buying sample are negative, but not significant, for both event windows. This result is similar to those presented in sections above for large inside shareholder buying firms. Thus, the presence of a large inside shareholder is related to insignificant performance for buying firms.

The CARs for the widely held selling firm sample are positive, but not significant, for both event windows. These results are also similar to those found in above sections for widely held selling firms. The difference in CARs between the two sides of the transaction (CAR_D) are also not significant for both event windows.

TABLE 25
Cumulative Abnormal Returns For Large Inside Shareholder Firms Buying From Widely Held Firms (Sample size = 33)

Large Inside Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-0.57%	-0.58%	-0.0325	13	1.2185
Three-Day	-0.70%	-0.70%	-0.0402	14	0.8704
Widely Held Sellers					
Two-Day	0.06%	0.33%	0.0036	20	1.2185
Three-Day	0.10%	0.17%	0.0058	20	1.2185
Differences Between Buyer and Seller CARs (I_B-W_S)					
		CAR_D		**Z_D**	
Two-Day		0.63%		0.9312	
Three-Day		0.60%		0.7400	

5.2.10 Results for the W_B-I_S Transaction

In this section the results for the widely held firms buying from large inside shareholder firms matched pair are presented. The descriptive statistics for the samples are presented in Table 26 below. The size of the widely held sample (given by the average market value) is again greater than that of the large inside shareholder sample. However, in this case the difference between the average market values is not significant with a t-statistic of 1.5282 (the corresponding p-value is 0.1390).

TABLE 26
Descriptive Statistics For Widely Held Firms Buying From Large Inside Shareholder Firms

Sample size = 26	
Average price of the transaction = $206.13M	
Number of transactions where price was disclosed = 16	
Widely Held Buyer (W_B)	
Average Market Value	$4.4B
Median Market Value	$1.7B
Average % Holding of Inside Shareholder	1.15
Median % Holding of Inside Shareholder	1
Large Inside Shareholder Seller (I_S)	
Average Market Value	$1.18B
Median Market Value	$508M
Average % Holding of Inside Shareholder	18.14
Median % Holding of Inside Shareholder	14
Average % Holding of Large Outside Shareholder	1.31
Median % Holding of Large Outside Shareholder	0

The CARs for the widely held buying firm sample are slightly negative for the two-day window and slightly positive for the three-day window. However, neither of them are significant. This continues the pattern of insignificant widely held buying sample CARs that has been observed so far, except for the case of the W_B-L_S transaction.

The CARs for the large inside shareholder selling sample are positive, but not significant, for both event windows.

TABLE 27
Cumulative Abnormal Returns For Widely Held Firms Buying From Large Inside Shareholder Firms (Sample size = 26)

Widely Held Buyers	CAR	Median CAR	Z	Number of Positive CARs	Non-parametric Z
Two-Day	-0.07%	-0.09%	-0.0955	13	0
Three-Day	0.12%	0.10%	0.2535	13	0
Large Inside Sellers					
Two-Day	0.27%	0.61%	0.6813	16	1.1767
Three-Day	0.03%	0.76%	0.4141	14	0.3922
Differences Between Buyer and Seller CARs (W_B-I_S)					
		CAR_D		**Z_D**	
Two-Day		0.34%		0.7768	
Three-Day		0.09%		0.3708	

The difference between the CARs (CAR_D in Table 27) are also not significant for both event windows.

5.2.11 Own Type and Partner Effects for Widely Held and Large Inside Shareholder Firms

In this section, own type and partner effects for widely held and large inside shareholder firms are examined. In Table 28below, CARs and DCARs are presented for the four transaction types used in the analysis.

TABLE 28
CARs and DCARs for Four Transactions

	W_B-W_S		I_B-I_S		W_B-I_S		I_B-W_S	
	Two-Day Event Window							
CAR	-0.31%	-0.41%	-0.39%	-1.50%*	-0.07%	0.27%	-0.57%	0.06%
DCAR	17,444,178	79,434	-6,080,235	$-1.3x10^7$	-6,211,205	7,055,633	4,889,722	67,137,286
MED	-1,760,972	-3,240,058	-311,341	-3,114,478	-984,146	706,459	-2,003,117	13,381,170
	Three-Day Event Window							
CAR	-0.57%	-0.34%	-0.64%	-1.43%*	0.12%	0.03%	-0.70%	0.10%
DCAR	3,730,272	3,501,606	2,936,601	$-2.0x10^7$	$-2.2x10^7$	6,122,672	18,553,304	74,669,560
MED	$-1.1x10^7$	-6,336,113	-2,395,274	-1,790,396	579,962	777,777	-3,094,540	9,377,502

*Significant at the 1% level using a two-tailed test

Table 29 below shows the CAR_Ds for the six differences that are used to examine own type and partner effects. Following the same pattern as in above sections, the first two differences are used to analyze own type effects and the next four to test for partner effects.

The first transaction difference ($[I_B|I_B{:}I_S]$ - $[W_B|W_B{:}W_S]$) is used to examine whether there is a difference in own type effects between large inside shareholder and widely held buying firms. The large insider firms have lower CARs than the widely held firms for both event windows, however, neither difference is significant. Therefore, there is no own type effect between large insider and widely held buying firms.

The second transaction difference ($[I_S|I_B{:}I_S]$ - $[W_S|W_B{:}W_S]$) is used to examine whether there is an own type effect for the selling firms. The large insider selling firms have lower CARs than do the widely held firms for both event windows, however, neither are significant. Therefore, there is no own type effect for large inside shareholder selling firms compared to widely held selling firms.

TABLE 29
Transaction Differences for Large Inside Shareholder and Widely Held Firms

TRANSACTION DIFFERENCE	CAR_D (%)	Z_D
$[I_B\|I_B{:}I_S]$ - $[W_B\|W_B{:}W_S]$		
Two-Day	-0.09	-0.7769
Three-Day	-0.07	-0.0096
$[I_S\|I_B{:}I_S]$ - $[W_S\|W_B{:}W_S]$		
Two-Day	-1.09	-1.2401
Three-Day	-1.09	-1.3667
$[I_B\|I_B{:}I_S]$ - $[I_B\|I_B{:}W_S]$		
Two-Day	0.18	0.1878
Three-Day	0.06	0.3188
$[I_S\|I_B{:}I_S]$ - $[I_S\|I_B{:}W_S]$		
Two-Day	-1.77	-2.8659*
Three-Day	-1.46	-1.9988**
$[W_B\|W_B{:}W_S]$ - $[W_B\|I_B{:}W_S]$		
Two-Day	0.39	0.3559
Three-Day	-0.69	-0.9722
$[W_S\|W_B{:}W_S]$ - $[W_S\|W_B{:}I_S]$		
Two-Day	-0.47	-0.8719
Three-Day	-0.24	-0.1713

*Significant at the 1% level using a two-tailed test
** Significant at the 5% level using a two-tailed test

The first partner effect examined is for large inside buying firms between the $I_B{:}I_S$ and $I_B{:}W_S$ transactions ($[I_B|I_B{:}I_S]$ - $[I_B|I_B{:}W_S]$ in Table 29). In this case, large insider buying firms do better (shown by a positive CAR_D) when dealing with their own type than with widely held firms. Neither of the CAR_Ds are significant, therefore, there is no partner effect in this case.

The next partner effect is tested for large insider selling firms between the same transactions mentioned immediately above ($[I_S|I_B{:}I_S]$ - $[I_S|I_B{:}W_S]$ in Table29). In this case, large insider selling firms do significantly worse when dealing with large insider firms than with widely held firms. Therefore, there is a significant negative partner effect

in this case. This result is consistent with the idea that management of inside selling firms have an incentive to negotiate a good price. This partner effect would be offset when dealing with another large inside shareholder firm, but has a positive impact when dealing with another ownership type that may not negotiate as hard. In this case, it appears that large inside shareholder selling firms benefit at the expense of the widely held firm.

The last two differences are used to test for partner effects for widely held buying and selling firms. That for widely held buying firms is given by the fifth transaction difference in Table 29 ($[W_B|W_B:W_S]$ - $[W_B|I_B:W_S]$). Neither of the CAR_Ds are significant, therefore, a partner effect does not exist for widely held buying firms between the two transactions.

The results are similar for widely held selling firms in the last transaction difference in Table 29. The CAR_Ds for both event windows are not significant, showing that there is no differential effect for widely held firms selling to large insider or widely held firms.

In summary, the results from this section provide evidence showing a significant positive own type effect for large outside shareholder firms; a significant negative own type effect for large inside shareholder firms; and, mixed results for widely held firms (for buying firms there was a negative own type effect; for selling firms there was no significant effect). There was some evidence of a partner effect when large outside shareholders were dealing with widely held firms, and strong evidence for a partner effect when large outside shareholders firms were dealing with large inside shareholder firms.

Evidence of mixed effects varied across transaction type, and are presented in each subsection.

5.3 Cross-Sectional Analysis of Cumulative Abnormal Returns

In this section, a series of dummy variable regressions are presented for the entire sample. This is done to isolate the effects of ownership structure and the disclosure of price on the cumulative abnormal returns for both buying and selling firms. The results of these regressions will be used to shed further light on the first and second questions laid out in section 3. In addition, the results will provide evidence to answer research question 3, which is concerned with the market's assessment of different types of information -- information that is at the discretion of management (price disclosure), and information that is not (ownership structure). The following dummy variable definitions are used.

L_B = 1 if there is a large outside shareholder present, 0 otherwise

I_B = 1 if there is a large inside shareholder present, 0 otherwise

P = 1 if the price of the transaction is disclosed, 0 otherwise

L_S = 1 if there is a large outside shareholder present, 0 otherwise

I_S = 1 if there is a large inside shareholder present, 0 otherwise

The first set of regressions involve examining an own type effect, regressing CARs against the ownership structure of the firm on only one side of the transaction. The first is for the buying firm sample and is of the following form:

$$CAR(BUY) = \alpha_0 + \alpha_1 L_B + \alpha_2 I_B$$

The results for the two- and three-day event window are presented in Table 5.27 below. The value of the t-Stat indicates the significance of the individual coefficients (a t-stat

with a value of 1.96, for example, is significant at the 5% level for a two-tailed test). The p-value represents the probability of accepting that the coefficient is significant when it is in fact not. The F statistic represents a test of the significance of the entire regression. The p-value for the F statistic represents the probability of accepting that the entire regression is significant when it is not. For example, the F statistic for the regression of two-day CARs in the table below is 2.7×10^{-6} (or 0.00027%). Thus, it is highly unlikely that the entire regression is not significant (a p-value less than or equal to 0.05 is commonly used as a benchmark of significance).

TABLE 30
Regression of Buying Firm CARs vs. Ownership Structure

$CAR(BUY) = \alpha_0 + \alpha_1 L_B + \alpha_2 I_B$			
Two-Day Event Window			
	α_0	**α_1**	**α_2**
Coefficient	-0.0034	0.0162	-0.0021
t-Stat	-1.3507	5.07677	-0.6812
p-Value	0.17772	0.00000064	0.49622
$R^2 = 0.07494$		F = 13.3628	
adjusted $R^2 = 0.06932$		p-value for F = 2.7×10^{-6}	
Three-Day Event Window			
Coefficient	0.0047	0.01948	-0.0012
t-Stat	-1.5779	5.09683	-0.3235
p-Value	0.1154	0.00000058	0.74653
$R^2 = 0.07411$		F = 13.1668	
adjusted $R^2 = 0.06848$		p-value for F = 3.2×10^{-6}	

The intercept in this regression can be partially interpreted as the effect on the widely held firm. This is because in dummy variable regressions there is a base category, in this case this category is the widely held firm.

For both event windows the only variable that is significant is the variable representing the presence of a large outside shareholder. The intercept and the large

inside shareholder dummy variable are not significant. The regressions for both event windows are significant, as indicated by the F-statistics (and the corresponding p-values). The second regression presented is identical to the one above except that it involves CARs of selling firms. The results for this regression are presented in Table 31 below.

TABLE 31
Regression of Selling Firm CARs vs. Ownership Structure

$CAR(SELL) = \alpha_0 + \alpha_1 L_S + \alpha_2 I_S$			
Two-Day Event Window			
	α_0	**α_1**	**α_2**
Coefficient	-0.0013	0.01831	-0.0032
t-Stat	-0.3748	3.96228	-0.6871
p-Value	0.7084	0.000091	0.49253
R^2 = 0.04815		F = 8.32094	
adjusted R^2 = 0.04236		p-value for F = 0.0003	
Three-Day Event Window			
Coefficient	0.0006	0.01911	-0.0051
t-Stat	0.15226	3.72011	-0.9954
p-Value	0.87908	0.00023	0.32027
R^2 = 0.04481		F = 7.71665	
adjusted R^2 = 0.039		p-value for F = 0.00053	

The results for the regression of selling firm abnormal returns vs. own type ownership yields similar results to those of the buying firms. The coefficient on the large outside shareholder variable is positive and significant for both event windows. The intercept and inside shareholder variable are not significant for either event window. The p-values for the F-statistic indicate that both regressions are significant.

The results for both the buying and selling firm regressions show that when the CARs are regressed against the ownership structure on the one side of the transaction, only the coefficient on the large outside shareholder variable is significant.

The next set of regressions includes a price disclosure variable in addition to the own type ownership structure. This is done to answer research question 3 which

compares the two types of information that ownership structure and price disclosure represent. The price disclosure variable represents whether or not the price paid for the asset was disclosed at the announcement of the transaction. The motivation for the inclusion of this variable comes from previous research showing that the disclosure of price appears to have an effect on the market reaction to the announcement of the divestiture. Klein (1986) partitioned a sample of selling firms into two subsamples based on whether or not the transaction price was revealed in the initial announcement. She found that the price group had a positive and significant announcement effect compared to that of the non-price group, which was not significant. Sicherman and Pettway (1992) examined abnormal returns for matched pairs of buying and selling firms. They also found that the subsamples of both buying and selling firms with the price disclosed in the announcement have significantly greater excess returns than the non-price subsample. They hypothesized that this resulted from the disclosure of price eliminating an informational asymmetry between managers and outside investors. The disclosure of the transaction price acted as a signal that the asset is being exchanged for its true value. The failure to disclose the price may lead both buying and selling firm shareholders to assume that the transaction is not in their best interests.

The CARs for both the buying and selling firms are regressed against their own type ownership structure and a dummy variable representing the disclosure of the transaction price. The results for the buying firm sample are presented in Table 32. The results for the ownership structure variables are similar to the above regressions without price. The coefficient on the large outside shareholder variable is positive and highly significant for both event windows.

TABLE 32
Regression of Buying Firm CARs vs. Ownership Structure and Transaction Price

$CAR(BUY) = \alpha_0 + \alpha_1 L_B + \alpha_2 I_B + \alpha_3 P$				
Two-Day Event Window				
	α_0	**α_1**	**α_2**	**α_3**
Coefficient	-0.0049	0.01593	-0.002	0.00307
t-Stat	-1.6675	4.97553	-0.6355	0.98208
p-Value	0.09637	0.0000011	0.52553	0.32378
$R^2 = 0.07765$		F = 9.2056		
adjusted $R^2 = 0.06922$		p-value for F = 0.0000073		
Three-Day Event Window				
Coefficient	-0.0055	0.01935	-0.0011	0.00148
t-Stat	-1.5381	5.04052	-0.3046	0.39598
p-Value	0.125	0.00000077	0.76086	0.69238
$R^2 = 0.07455$		F = 8.80762		
adjusted $R^2 = 0.06609$		p-value for F = 0.000012		

The coefficient on the large inside shareholder variable is negative and not significant for both windows. Interestingly, the coefficient on the price variable (P) is not significant. This is opposite to the result found in Sicherman and Pettway (1992) for their buying firm sample. The regression results above point to ownership structure being an important determinant in whether or not the market assesses the transaction as being in favor of shareholders. The disclosure of price does not have a significant effect when ownership structure is taken into account. The significance of the regression (given by the F-statistic) is also less than that of the no-price regression presented in Table 30. This shows that the inclusion the price variable has decreased the significance of the regression.

There is the possibility that the large outside shareholder variable is being carried by the price disclosure variable. To test if this is the case, buying firm CARs are regressed against large inside ownership and price. The results for this regression are

presented in Table 33. The coefficient on the price variable increases and becomes more significant for both regressions (compared to the above regression results). However, the coefficient is still not significant for either event window regression.

TABLE 33
Regression of Buying Firm CARs vs. Inside Ownership and Transaction Price

$CAR(BUY) = \alpha_0 + \alpha_1 I_B + \alpha_2 P$			
Two-Day Event Window			
	α_0	**α_1**	**α_2**
Coefficient	0.00089	-0.0027	0.00438
t-Stat	0.31757	-0.837	1.35873
p-Value	0.75102	0.40323	0.17516
$R^2 = 0.00804$		F = 1.33334	
adjusted $R^2 = 0.00201$		p-value for F = 0.265	
Three-Day Event Window			
Coefficient	0.00162	-0.002	0.00308
t-Stat	0.48029	-0.5195	0.79525
p-Value	0.63134	0.60378	0.42704
$R^2 = 0.00287$		F = 0.47293	
adjusted $R^2 = -0.0032$		p-value for F = 0.6236	

The intercept term and the coefficient on the inside shareholder variable remain insignificant. Without the large outside shareholder variable both regressions are not significant, as indicated by the p-values for the F-statistic below.

The results for the regression of selling firm CARs against own type ownership and price are presented in Table 34. The results for the selling firm sample mirror those of the buying firm. The coefficient on the large outside shareholder variable is still positive and significant while that on the large inside shareholder variable is negative and not significant.

TABLE 34
Regression of Selling Firm CARs vs. Ownership Structure and Transaction Price

$CAR(SELL) = \alpha_0 + \alpha_1 L_S + \alpha_2 I_S + \alpha_3 P$				
Two-Day Event Window				
	α_0	α_1	α_2	α_3
Coefficient	-0.0044	0.01821	-0.0033	0.00592
t-Stat	-1.0318	3.94377	-0.7046	1.30552
p-Value	0.30294	0.000098	0.48158	0.19263
$R^2 = 0.05307$		F = 6.12729		
adjusted $R^2 = 0.04441$		p-value for F = 0.00046		
Three-Day Event Window				
Coefficient	-0.0016	0.01935	-0.0011	0.00148
t-Stat	-0.3435	3.70353	-1.0059	0.85513
p-Value	0.73141	0.00025	0.31519	0.3931
$R^2 = 0.04693$		F = 5.38938		
adjusted $R^2 = 0.03822$		p-value for F = 0.00125		

The coefficient for the price variable is positive but not significant for both event windows. The inclusion of the price variable has led to a decrease in the significance of the regression compared to the results in Table 34. Thus, the disclosure of price does not appear to be a factor in the market's assessment of selling and buying firm performance.

This contradicts the results for selling firm samples in Klein (1986) and Sicherman and Pettway (1992), both which found a positive and significant effect of the disclosure of the transaction price. To find out whether or not the large outside shareholder variable is being driven by the price variable, regressions were run with just large inside shareholder and price as the independent variables. The results of these regression for the two- and three-day event windows are in Table 35 below.

TABLE 35
Regression of Selling Firm CARs vs. Inside Ownership and Transaction Price

$CAR(SELL) = \alpha_0 + \alpha_1 I_s + \alpha_2 P$			
Two-Day Event Window			
	α_0	**α_1**	**α_2**
Coefficient	0.00655	-0.0066	0.00464
t-Stat	1.53717	-1.2488	0.90093
p-Value	0.12521	0.21262	0.36829
$R^2 = 0.00708$		F = 1.17259	
adjusted $R^2 = 0.00104$		p-value for F = 0.31085	
Three-Day Event Window			
Coefficient	0.18864	-0.0593	0.00079
t-Stat	5.57025	-1.4181	0.01928
p-Value	5.3×10^{-8}	0.15711	0.98463
$R^2 = 0.00608$		F = 1.00552	
adjusted $R^2 = 0.000033$		p-value for F = 0.36698	

It is clear from the above results that the price variable was not driving the significance of the large outside shareholder variable. In fact, the coefficient on the price variable is less significant compared to regression that included the large outside shareholder variable. Without the large outside shareholder variable, the regression is not significant, as indicated by the p-value for the F-statistic.

For both the buying and selling firm samples, the strongest effect appears to be from the presence of a large outside shareholder. The presence of a large inside shareholder does not have a significant effect for either sample. The inclusion of a dummy variable representing whether or not the transaction price was disclosed did not have a significant effect for the buying and selling firm abnormal returns in the presence of ownership structure variables. The signaling hypothesis advanced by Sicherman and Pettway (1992) to explain their findings (as well as those of Klein (1986)) assumed that the market will view the disclosure of price as a signal by management that the transaction is good for shareholders. This is supposed to overcome informational

asymmetry that is created because shareholders do not have the same information management does. This implicitly assumes a widely held corporation subject to the agency costs of managerial discretion. However, as the above results imply, in the presence of other types of ownership structures, the disclosure of price is no longer a significant factor in the market assessment of the effects of a sell-off on buying and selling firm shareholders.

A possible reason for this is that the disclosure of price is at the discretion of management and therefore may not be seen as a true indication that the transaction is good for shareholders. The presence of a large outside shareholder in a firm announcing either the sale or acquisition of an asset is not under the control of management and may be viewed as a more valid piece of information concerning whether the transaction is in the best interests of shareholders. The evidence presented here sheds some light on the nature of information that the market utilizes when assessing the impact of a transaction on shareholder wealth, particularly information which is under the control of management, and information which is not. The above results show, that in the case of divestitures, ownership structure is a more 'important' piece of information than the disclosure of price.

The next series of regressions involve the ownership structure on the other side of the transaction as well as the own type ownership. The buying firm sample results are presented in Table 36.

TABLE 36
Regression of Buying Firm CARs vs. Ownership Structure On Both Sides Of The Transaction

$CAR(BUY) = \alpha_0 + \alpha_1 L_B + \alpha_2 I_B + \alpha_3 L_S + \alpha_4 I_S$					
Two-Day Event Window					
	α_0	**α_1**	**α_2**	**α_3**	**α_4**
Coefficient	0.00108	0.01656	-0.0018	-0.0045	-0.0073
t-Stat	0.35974	5.21991	-0.5658	-1.4426	-2.3097
p-Value	0.71924	3.2×10^{-7}	0.57193	0.15008	0.02153
$R^2 = 0.09424$		F =8.50597			
adjusted $R^2 = 0.08316$		p-value for F = 0.0000015			
Three-Day Event Window					
Coefficient	0.00211	0.02005	-0.0006	-0.0073	-0.0109
t-Stat	0.5911	5.31285	-0.1691	-1.9561	-2.8896
p-Value	0.55486	2×10^{-7}	0.86583	0.0513	0.00412
$R^2 = 0.10534$		F = 9.62526			
adjusted $R^2 = 0.09439$		p-value for F = 2.3×10^{-7}			

This regression is taking into account ownership variables for the firms on both sides of the transaction. Therefore, the results can be used to analyze overall own type and partner effects for the entire sample. Comparing the results from Table 36 to those of the own type ownership regression (in Table 30), shows that there is no effect on the large outside and large inside variable coefficients, on the buying firm side, from the addition of the partner ownership structure. The coefficient of the large outside shareholder variable is positive and significant while that on the large inside ownership variable is negative and not significant (for both event windows). The coefficient for the large outside selling shareholder variable is negative for both event windows but only marginally significant (with a p-value of 0.0513) for the three-day window. This suggests an overall slightly negative partner effect for buying firm sample from dealing with large outside shareholder firms. This may reflect the significant negative returns that widely held buying firms experience when dealing with large outside shareholder selling firms.

The coefficient on the large inside shareholder selling firm is negative and highly significant for both event windows. This indicates that there is a negative partner effect for buying firms dealing with large inside shareholder firms. It provides further evidence for large inside shareholder firms negotiating a good price.

The results for the regression of selling firm CARs vs. ownership structure on both sides of the transaction is presented in Table 37. The results for the selling firm regressions are similar to those for the buying firm, except that the coefficient for the large outside shareholder variable is now positive, but not significant, for both event windows. Also, whereas the coefficient on the partner inside shareholder variable was highly significant for both event windows for the buying firm regression, it is significant only for the two-day window for the selling firm regression. These results provide evidence that large inside shareholder firms negotiate a good price on the selling side as well.

TABLE 37
Regression of Selling Firm CARs vs. Ownership Structure On Both Sides Of The Transaction

$CAR(SELL) = \alpha_0 + \alpha_1 L_S + \alpha_2 I_S + \alpha_3 L_B + \alpha_4 I_B$					
Two-Day Event Window					
	α_0	α_1	α_2	α_3	α_4
Coefficient	0.00103	0.01863	-0.0031	0.00506	-0.0098
t-Stat	0.23419	4.04354	-0.674	1.09215	-2.1611
p-Value	0.81499	6.6×10^{-5}	0.50081	0.27557	0.03142
$R^2 = 0.06568$			F = 5.74654		
adjusted $R^2 = 0.05425$			p-value for F = 0.00018		
Three-Day Event Window					
Coefficient	0.0016	0.01923	-0.0051	0.00834	-0.0094
t-Stat	0.32674	3.7563	-0.999	1.61993	-1.8598
p-Value	0.81499	0.0002	0.50081	0.27557	0.06381
$R^2 = 0.06322$			F = 5.51681		
adjusted $R^2 = 0.05176$			p-value for F = 0.00026		

The last set of regressions presented run CARs against ownership structure on both sides of the transaction and price variable for both the buying and selling firm samples. The results for the buying firm regression are presented in Table 38.

The addition of the price variable to the regression does not change any of the results for the coefficients on the variables that were significant (in the no-price regression). The coefficient on the price variable is positive, but not significant, for both event windows. This is a similar result to that found for the own type regression for buying firms (results presented in Table 32).

TABLE 38
Regression of Buying Firm CARs vs. Ownership Structure On Both Sides Of The Transaction And Price

$CAR(BUY) = \alpha_0 + \alpha_1 L_B + \alpha_2 I_B + \alpha_3 P + \alpha_4 L_S + \alpha_5 I_S$						
Two-Day Event Window						
	α_0	**α_1**	**α_2**	**α_3**	**α_4**	**α_5**
Coefficient	-0.0005	0.01628	-0.0016	0.00322	-0.0046	-0.0073
t-Stat	-0.1593	5.1161	-0.5167	1.03664	-1.4585	-2.3225
p-Value	0.87352	5.3×10^{-7}	0.60569	0.30067	0.14566	0.02082
$R^2 = 0.09722$			F = 7.02126			
adjusted $R^2 = 0.08337$			p-value for F = 0.000003			
Three-Day Event Window						
Coefficient	0.00125	0.0199	-0.0005	0.00171	-0.0074	-0.0109
t-Stat	0.31029	5.24956	-0.1471	0.46241	-1.9606	-2.8916
p-Value	0.75657	2.8×10^{-7}	0.88317	0.6441	0.05078	0.0049
$R^2 = 0.10592$			F = 7.72426			
adjusted $R^2 = 0.09221$			p-value for F = 7×10^{-7}			

The results for the selling firm regression are presented in Table 38. The results are almost identical to those of the no-price regression presented in Table 36.

TABLE 38
Regression of Selling Firm CARs vs. Ownership Structure On Both Sides Of The Transaction And Price

$CAR(SELL) = \alpha_0 + \alpha_1 L_S + \alpha_2 I_S + \alpha_3 P + \alpha_4 L_B + \alpha_5 I_B$						
Two-Day Event Window						
	α_0	**α_1**	**α_2**	**α_3**	**α_4**	**α_5**
Coefficient	-0.0015	0.01856	-0.0032	0.00505	0.00463	-0.0096
t-Stat	-0.3062	4.02747	-0.6878	1.11351	0.99608	-2.1074
p-Value	0.75967	0.00007	0.49206	0.26631	0.31995	0.03585
$R^2 = 0.06922$			F = 4.84858			
adjusted $R^2 = 0.05494$			p-value for F = 0.00027			
Three-Day Event Window						
Coefficient	$-5x10^{-6}$	0.01919	-0.0052	0.00317	0.00807	-0.0092
t-Stat	-0.0009	3.74274	-1.0057	0.62924	1.56044	-1.86266
p-Value	0.9993	0.00022	0.31529	0.52963	0.11963	0.06867
$R^2 = 0.06435$			F = 4.48448			
adjusted $R^2 = 0.05$			p-value for F = 0.00058			

The coefficient on the price variable is again positive and not significant for both event windows, a continuation of the previous results. The only effect of adding the price disclosure variable is to decrease the significance of the regression compared to those without the price variable.

The overall theme emerging from all of the regressions is that the presence of a large outside shareholder has a significantly positive effect on the market reaction to the announcement of a sell-off, for both buying and selling firms. The presence of a large inside shareholder on the other side of the deal has a negative effect on the market's reaction to the deal, whether on the buying or selling side. These results are consistent with a positive own type effect from the presence of a large outside shareholder and a negative partner effect for firms dealing with large inside shareholder companies. The own type effect suggests that large shareholder firms are making deals that are in the best interests of shareholders. The partner effect, advanced in section 3, suggested that the

ownership structure of the firm on the other side of the transaction could have an effect on the market's reaction. The significant negative coefficient on the large inside shareholder variable shows that such an effect appears to exist. Notably, there is no own type effect from the presence of large inside shareholders, but a significant negative partner effect from their presence on the other side of the transaction. This provides support for the notion that there are two components to an asset sale. The first is whether buying or selling an asset is a value increasing for the firm as a whole (reflected by an increase in market value). The second is whether the management of the firm has an incentive to negotiate a fair price. Ideally, management would have the incentive to do both. However, the above results show that it is possible for management to buy or sell an asset for reasons that are not in the best interests of all shareholders, but still may have an incentive to get as good a price as possible. This suggests that inside ownership may align management's interests with those of outside shareholders for some actions but create opportunities for management to deviate from this path for others. Put another way, inside ownership does not ensure that managers will do the right things, but it does seem to ensure that managers will do things right.

The results of this section also show that the disclosure of price does not have a significant affect on the market's assessment of the buying or selling of an asset. This suggests, given the significant effect of ownership structure variables, that the market differentiates between information that is at the discretion of management and that which is not (and values the latter more highly).

In the concluding section, the implications of the research are discussed, along with areas for future research.

6. Conclusion

The central finding of this paper is that ownership structure matters in the market's assessment of a firm's purchase or sale of an asset. The market reacted more favorably to asset sales or purchases by firms with large outside shareholders than for those by widely held firms or firms with large insides shareholders present. Previous research has focused on the agency problems in widely held corporations. This study suggests that the agency problems in firms with large inside owners are also significant.

Another major finding of this research has to do with the effect of price disclosure on the market's assessment of an interfirm asset sale. Past research on asset sales found that the disclosure of price had a positive effect on the stock price of the firm. However, when price disclosure and ownership structure are both incorporated as variables in this study of interfirm asset sales, ownership structure had a significant effect, but price disclosure did not. Perhaps this departure from earlier work is because the market values information that is not at the discretion of management , such as ownership structure, more highly than information controlled by management, such as price disclosure

There are a number of possible explanation for these findings. The one favored in this dissertation is that large outside shareholders have a positive effect on firm performance through monitoring of management. If this explanation is the correct one then the implications presented below follow.

Implications

The findings of this research may be helpful to policy makers in the U.S., to potential large investors, and to firms themselves.

First, it may be of special interest to U.S. policymakers that firms with large outside shareholders present perform better in interfirm asset sales than firms with other ownership structures. It would not be wise to legislate one type of ownership structure, but this evidence does suggest that regulatory constraints preventing institutions such as banks and insurance companies from becoming large shareholders be removed. Over the past several decades, the U.S. regulatory environment has led to an over reliance on the widely held corporation. Roe (1994) suggested two main reasons: a mistrust of private large accumulations of power in the U.S. which were perceived to be against the publics interest; and interest group politics that blocked large institutions from taking ownership positions. An example of the latter is the lobbying of small banks to limit the power of large banks.

Banks, insurance companies, mutual funds and pension funds have all been severely restricted from taking large equity positions in corporations. The National Bank Act (1863) did not formally prohibit stock ownership by banks, but it was later interpreted by the Supreme Court to imply such a prohibition.

Insurance companies are regulated by state laws which place limits on their investment in stock. Life insurance companies may typically invest only 20% of their assets in stocks and considerably less in any single company. For most of this 20th century New York (where most insurance companies operate) prohibited insurance

companies from owning stock completely. After 1951, the maximum amount of ownership allowed in any company was only 2%.

Removal of these constraints would allow potential large shareholders to become involved in corporations, benefiting themselves and other shareholders through their monitoring role, leading to the possibility of improved organizational performance. Liberalization of the U.S. market would allow the market, unencumbered by regulation, to "choose " the best structure.

Second, the results of this paper may also have implications for the investment strategy of large institutions. Many institutions follow an "indexing" strategy, creating funds which hold securities in the same proportion as some market index, such as the S&P 500. The institutions only adjust their portfolio so it continues to match the index. A large indexed fund can potentially hold a small percentage of shares in every company in the index. The institutions tend to be passive investors. This research suggest that large outside shareholders can have a positive impact on corporate performance and large institutions may benefit from taking a large ownership position.

The size of the position is crucial for effective monitoring. Monitoring can be viewed as a two-stage activity: the first has to do with investing in research, and the second in communicating this research to management. The decision for the first stage does not necessarily require a large percentage holding, it can be based on the dollar amount of the holding (Pound, 1993). For example, owning one percent of the stock in GM would be worth several million dollars. If management were proposing to sell an asset that could have a negative effect on shareholder value, it would be

worth it for the shareholder to invest in an outside expert to analyze the effect of the sale. If it turned out that the decision to sell the asset was a bad one , the next step would be to communicate this to management and change the decision. However, a large percentage stake may be required to force management to pay attention. The percentage holding of the company matters because it gives the shareholder the power to make management listen. An important question is whether a critical minimal percentage stake is required to make management pay attention. This thesis uses the five percent level of ownership because it is at that point that the presence of a the shareholder becomes public knowledge. At 5%, the market can utilize this information when assessing whether management decisions are in the interests of shareholders.

Thirdly, this research may benefit corporations in the U.S. interested in maximizing the value of their stock.. The results provide a strong cautionary note to potential board of director members concerning the negative effect on firm value resulting from large inside ownership structures. The board of directors is supposed to monitor management on behalf of shareholders, but this is rarely done in practice, as the following statement from a director of a company illustrates:[4]

> But beyond simple size and accompanying complexity, a public company also has a diffuse shareholder interest. Often, there are many shareholders and no one person with a controlling interest – in other words, no one to tell the directors what the shareholders want them to do and to kick them out if they don't do it. In this circumstance, if anyone controls the board, it is likely to be company's management, through its direction of the annual shareholder meeting process, virtually decides who will be directors if the firms is widely held.

[4] Quoted from the Globe and Mail (4/29/96)

Therefore, the board may be under he effective control of management in a widely held corporation and, even more so, in the case of large inside ownership firms. Initiatives to improve corporate governance that focus on board reform may be misguided because board members in the firms mentioned above lack either the incentive or the power to effect change. Efforts to make directors accountable will discourage most from taking this role. However, the presence of a large shareholder is a naturally effective device for monitoring management, because they already have the incentives to do so, as well as the power to affect management decisions.

The negative impact of large inside ownership positions may have implications for management compensation. Jensen and Meckling (1976) assumed that management stock ownership would align management and shareholder interests, thereby improving firm performance. To facilitate this, many management compensation packages include discounted stock purchase plans and the granting of stock options. However, the results of this paper suggest that firm performance is adversely affected when management ownership exceeds 5%. Thus such compensation plans may lead to an effect which is the opposite of what was intended. If management has effective control, they may have great influence over their own compensation. Management may benefit at the expense of the firm (by entrenching themselves). One way to avoid this situation is to ensure effective monitoring through large outside shareholders.

Large outside shareholders also affect the market's assessment of information about corporate announcements. This paper compared two types of information concerning the market's assessment of an asset sale: ownership structure and price

disclosure. The presence of a large outside shareholder was associated with a positive market assessment, whereas the disclosure of the price of the transaction was not. The decision to disclose the price as a signal to the market that transaction is in the best interests of shareholders is at the discretion of management and is subject to agency problems. Ownership structure, on the other hand, is not under management control and may be seen as a more credible piece of information regarding whether or not the transaction is value increasing for shareholders.

Limitations and Areas for Future Research

There are various explanations for why firms with large outside shareholders perform significantly better when buying or selling assets than firms with other ownership structures. First, they may be more efficient than firms with other ownership structures because large outside shareholders monitor management. This explanation is favored in this paper, because the results are consistent with other empirical and theoretical research, as well as a large body of anecdotal evidence, which support this explanation.

Second, large outside shareholder firms may be more efficient in some respects, but less so in others. That is, the results may be specific to the type of transaction examined in this paper (asset sales) and may not be generalizable to the performance of firms making other corporate decisions. It remains unclear whether the overall performance of firms with large outside shareholders present is superior to that of firms with other ownership structures. On the other hand, asset sales represent a

significant corporate event. Even if the value increasing effect of large shareholders is specific to this type of transaction, the results found are very important.

Furthermore, it seems unlikely that large outside shareholder firms would have an effect on asset sales and not have an effect on other important management decisions. Additional research is necessary which examines the effect of ownership structure on other corporate decisions. Research questions warranting further study include: What is the role of large shareholders in other types of corporate restructuring, such as takeovers and spin-offs?; Does ownership structure have an effect on the financial structure of the firm?; and Does ownership structure impact payout policies, such as dividend policy? It is crucial that future researchers not only take into account ownership structure, but that they identify whether larger shareholders are insiders or outsiders, as this distinction was found to have very different implications for firm performance. Also, in transactions between firms, ownership structure on both sides of the transaction should be examined.

So far, the results found for large outside shareholder firms have been attributed to the value increasing effect of monitoring management by large shareholders. However, there is a competing hypothesis that large outside shareholders may be the consequence, rather than the cause, of superior performance. Perhaps large outside shareholders take positions in firms that are already high performers. This argument suggests that these high performing firms simply have good management and the market is assessing their sound judgment favorably

Three arguments make this explanation unlikely. First, for large outside shareholders to invest in firms that are already better performers, they would have to

be better stock pickers than the rest of the investment community. Given the large number of sophisticated investors who do not take large ownership positions in corporations, this argument is weak.

Second, if large outside shareholders choose firms that are already performing well, then there should be no stock price reaction at the time their investment becomes public knowledge. Mikkelson and Ruback (1985) found a positive stock price reaction to the announcement that a shareholder had taken a large ownership position of at least 5%. Their results suggest that the market expects the presence of large shareholders to have a positive effect on future performance.

Third, if large investors chose (or by chance are associated with) firms that are better performers, it would not be rational for them to exceed the 5%ownership level unless they planned to monitor. Once and investor purchases an equity position of greater than 5%, it automatically decreases their flexibility and increases the administrative costs surrounding their investment substantially. For example, any material change in the equity position must be reported to the SEC within ten days. Thus, there is no reason for large shareholders to take a 5% or greater position unless they believe that in doing so they will be able to affect the performance of the firm through monitoring. If investors were simply present to take advantage of good performers, they would retain their flexibility and not hinder their trading activity by staying below the 5% level. Determining why large outside shareholders take their ownership positions is an important area of study.

Future research efforts in these areas will expand our understanding of the role of large shareholders in corporate performance.

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