This is to certify that the
dissertation entitled

INSTITUTIONAL INVESTOR PREFERENCES AND FIRM VALUE

presented by

Gwinyai T. Utete

has been accepted towards fulfillment
of the requirements for the

Ph.D. degree in Finance

Jen Kon Cang
Major Professor's Signature

07/19/2007
Date

INSTITUTIONAL INVESTOR PREFERENCES AND FIRM VALUE

By

Gwinyai T. Utete

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Finance

2007

ABSTRACT

INSTITUTIONAL INVESTOR PREFERENCES AND FIRM VALUE

By

Gwinyai T. Utete

This dissertation demonstrates the existence of different institutional investor preferences for equity characteristics, and makes the link between these preferences and firm value. We show that transient institutional investors (those that trade frequently with a view to maximizing short term gains) possess superior information to other market participants and actively seek out situations in which they can exploit this informational advantage. Their presence, particularly under conditions where firm-level information quality is poor, is associated with both higher returns and higher subsequent firm values.

We also find that dedicated (long term) and quasi-indexing (passive with broad holdings) institutional investors are attracted to firms that enable them to engage in monitoring activities. Although there is some evidence to suggest that the arrival of dedicated institutional investors enhances firm transparency, the presence of both dedicated and quasi-indexer investors is of limited importance in determining overall firm value when other features of the firm's contracting environment (such as corporate governance provisions, information precision and free cash flows) are fully considered. These results are robust to both a fixed effects and an instrumental variables procedure that mitigates the endogeneity problem. Therefore, the previously documented linear relationship between institutional holdings and Tobin's Q is almost entirely driven by the trading actions of active investors who do not engage in monitoring in the conventional sense.

ACKNOWLEDGMENTS

I would like to express my gratitude to the members of my dissertation committee, Dr. Jun-Koo Kang, Dr. Edward Fee, Dr. Stephen Dimmock and Dr. Wei-Lin Liu, for their insightful comments and guidance through this process. I would also like to extend my thanks to the Department Chair, Dr. Geoffrey Booth, the Director of the Ph.D. program, Dr. Charles Hadlock and Dr. Kirt Butler for all of their advice and assistance. Finally, I would like to thank my colleagues for their contributions during our time together in the Ph.D. program.

TABLE OF CONTENTS

INSTITUTIONAL INVESTOR PREFERENCES AND FIRM VALUE

LIST OF TABLES

1.1 Introduction

This dissertation examines the link between ownership structure and firm value by focusing on the role of differences in institutional investment philosophy. In a standard rational expectations framework, investors are only concerned with the expected payoffs of the assets that they hold. Assuming a common information set, market clearing prices can be derived from a given agent's expectation of those payoffs and the full covariance matrix of payoffs with respect to all other assets in the economy. In reality however, investors display considerable heterogeneity in terms of both the information they possess and their preferences for certain characteristics in equities. The key contribution of this study lies in how we use a more refined demarcation of investor types to reveal how institutional ownership structure relates to firm value. We contend that in the presence of information asymmetry, differing demand specifications are associated with real effects on asset prices, and we test this conjecture in a multiple regression framework.

Using prior empirical research as a guide, we develop three categories of stock characteristics that are concordant with investor demand. Briefly, these are the risk-return relationship, the relative opacity of the firm's operations to outside investors and features that enable monitoring. We find that institutional investors differ quite dramatically in their preferences for these characteristics, primarily because of differences in both their investment horizons and ability to collect firm specific information. Short term, high turnover (transient) institutional investors are found to be attracted to firms that perform well (in both an accounting and financial sense) but have a high level of informational uncertainty. Institutional investors with a longer term focus (quasi-indexer and dedicated)

are found to be attracted to firms with features that facilitate oversight of managerial behavior. However, we find that only the presence of the transient class of institutional investor is consistently associated with higher firm values.

The rest of the paper is organized as follows: in the remainder of this section, we motivate the ownership-performance problem through a discussion of key contributions in the area. In section 2, we develop our hypotheses and design appropriate empirical tests. In section 3, we present our data sources and conditions for inclusion in the final sample of firms. Section 4 provides results and section 5 concludes with an analysis of the results and possibilities for future research.

1.2 Corporate Ownership and Firm Value

The relationship between corporate ownership and firm performance is one that has attracted substantial interest since the pioneering work of Berle and Means (1933). According to Berle and Means (1933), as a firm's ownership structure becomes more diffuse, shareholders' ability to control management diminishes. The resulting shift in power allows managers to act in their own self interest potentially destroying shareholder value in the process. This rather straightforward argument is a variant of the classic principal-agent problem. Berle and Means' (1933) proposition went essentially unchallenged and unmodified in the financial economics literature for over four decades. Jensen and Meckling (1976) represented the first significant reexamination of the topic. Jensen and Meckling (1976) propose equity ownership by management as a solution to the agency problem. They argue that as managers' shareholdings in their own companies increase, their incentives become more aligned with those of outside shareholders. As a

result, they become apt to take actions that increase firm performance and consequently, firm value. While this argument is intuitively appealing, it presents some uncomfortable equilibrium implications. If firms can increase value by awarding the CEO more stock, why do we observe a multiplicity of firm ownership structures empirically?

Demsetz and Lehn (1985) formalized this question by examining the shareholdings and financial performance of 511 large U.S. firms over the period 1976-1980. Their OLS regressions of return on equity on a variety of ownership measures fail to detect any significant relationship between the two. They interpret this evidence as indicative of firms always being at their optimum ownership structure. Much like the Jensen and Meckling (1976) supposition, this argument, while intuitively attractive, also suffers from a critical flaw in equilibrium. If firms naturally tend towards their optimum shareholder structure then those that do not will eventually fail. However, in the long run, one would expect to see all observed shareholding structures perform equally well. Clearly this does not conform to empirical reality either[1]. Thus we have a conflict which persists in the literature to this day.

Previous studies that examine the link between ownership structure and performance tend to make a direct examination of how a particular type of ownership relates to firm value. There is a common structure to the research question that is asked; how does management ownership relate to firm value? Or, how does the ownership of large block holders relate to firm value? These studies typically make fairly broad assumptions about the motivations of potentially disparate groups of shareholders. We instead take the view that insiders and other shareholders are unique actors who differ in their utility specifications, initial wealth, and ability to access markets.

[1] La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998).

Amongst outside shareholders, there exist differing cost structures with respect to firm specific information acquisition. Diamond's (1984) model of financial intermediation is instructive. To wit: Given a firm with m outside investors and a manager in control of a project whose terminal outcome is the random variable $\tilde{y}$, the optimal contract specifies:

$$\max_{\phi(\cdot)} E_{\tilde{y}}[\max_{z\in[0,\tilde{y}]} \tilde{y} - z - \phi(z)] \tag{1}$$

subject to

$$z \in \arg\max_{z\in[0,y]} y - z - \phi(z) \tag{2}$$

and

$$E_{\tilde{y}}[\arg\max_{z\in[0,\tilde{y}]} y - z - \phi(z)] \geq R \tag{3}$$

Where y is the true realization of $\tilde{y}$, $z \geq 0$ is the payment the manager makes to the outside investors and R is the competitive rate of interest in the economy. $\Phi(z)$ corresponds to the non pecuniary penalty function that the firm's security holders can impose on the manager, given a reported value of z. Under these conditions, there exist incentives for intermediaries to develop specialized abilities at monitoring managerial behavior. More formally, delegation of monitoring is optimal provided that the expected deadweight penalty when there is no monitoring and the total cost of monitoring by all investors both exceed the cost of having a specialized monitor:

$$K + D \leq \min[E_{\tilde{y}}[\phi^{*}(\tilde{y})], (m \cdot K)] \tag{4}$$

Where K is the direct cost of monitoring and D is the cost of delegation.

Casting institutional investors as the intermediary between firms and individuals, it follows that the array of information a given institution collects will be the outcome of a competitive process. The inputs to which are the demands of its clientele and the innate abilities and comparative advantages it may possess with regards to information acquisition. Therefore, in a competitive equilibrium, there can exist multiple classes of intermediaries pursuing different strategies. By acknowledging these differences, the predictions concerning the relevance of ownership structure with respect to firm value change dramatically, and this is what we demonstrate empirically.

1.3 Institutional Investor Types and Their Characteristics

While there is no unambiguous theoretical relationship between shares demanded and observable firm characteristics, prior empirical research has identified certain patterns. For example, with regards to institutional investors, Gompers and Metrick (2001) find that firm size has a concave relationship with institutional holdings. Furthermore, they find that institutions express a preference for firms with high share turnover and prices per share. Gompers and Metrick (2001) argue that prudence considerations cause institutional investors to avoid small illiquid stocks. In terms of historical return patterns, Gompers and Metrick (2001) find that the prior 11 month returns have a negative association with future institutional holdings. They also find that institutions exhibit a weak preference for high book to market stocks. As such there is some evidence of institutional investors as a group preferring value over growth stocks. Falkenstein (1996) and Del Guercio (1996) provide confirmatory evidence of Gompers

and Metrick's (2001) findings. Additionally, Wahal and McConnell (1998) demonstrate that institutional ownership is positively related to research and development intensity.

All of these studies use the standard classification scheme provided by the Thomson Financial CDA/Spectrum database. The database categorizes firms' institutional equity holdings into shares held by banks, insurance companies, investment advisers and pensions and endowments. Bushee (1998, 2001), however, notes that these categories mask tremendous heterogeneity in both investor behavior and investment objective. The problem is further compounded by errors in the database itself. Indeed the accompanying manual notes that "TYPECODE [has] serious classification errors in recent years, such that the Other group is unrealistically large. Many Banks and Independent Investment Advisors are improperly classified in the Other group in 1998 and beyond. For example, in the first quarter of 1999, the number of independent investment advisors drops from over 1200 to about 200, while the Other group jumps from roughly 100 to over 1300. TFN...[regrets] that [this] occurred, but they have no plans to fix the problem."

To mitigate the impact of these issues, Bushee (1998, 2001) develops a two tiered institutional investor taxonomy based on observable characteristics of the portfolios that each institution holds. For the first layer of the classification scheme, he identifies eight variables that characterize prior trading behavior[2]. Bushee calculates these eight variables at the end of each calendar quarter for every institution on the Thomson Financial

[2] These are: an institution's quarterly portfolio turnover percentage, its quarterly portfolio turnover percentage using only sales transactions, its percentage of holdings held continuously for two years, the percentage of its portfolio firms that it holds for more than two years, its percentage of holdings that comprise blocks of 5% or more, the percentage of portfolio firms held in blocks of 5% or more, its average percentage ownership of its portfolio firms and the average investment size (measured in millions of dollars) in its portfolio firms.

database and then computes annual averages. He then uses these year end averages as inputs to a factor and k-means cluster analysis which condenses them into two measures. These first is a measure related to the size of holdings. The second is a measure related to the frequency of portfolio turnover. The k-means cluster analysis procedure produces factors that explain the common variance between the two characteristics. Thus, firms in each cluster are more similar to each other than firms in any other cluster.

Having done so, he is then able to classify institutions into three types: dedicated, transient and quasi-indexer. Dedicated institutions tend to trade infrequently and hold large positions in a few firms. Transient institutions are characterized by having small ownership stakes in several firms and turning over their portfolios frequently. Quasi-indexers hold large well diversified portfolios and do not trade frequently.

In the second tier of the Bushee[3] taxonomy, he identifies fifteen stock characteristics that relate to investment style. In similar fashion, he condenses these variables into four factors that explain the common variance with respect to size considerations (firm size, maturity and index membership), growth characteristics (historical sales, earnings growth and firm risk), value characteristics (income investment style features such as high book to market ratios, earnings to price ratios and dividend yields) and fiduciary incentives (high stock ratings, steady earnings growth, lower leverage and positive earnings). From these four factors, he classifies each institution into the investment styles large value, large growth, small value and small growth. The terms

[3] This procedure is detailed in Abarbanell, Bushee and Raedy (2003). The fifteen characteristics are: the weighted average market capitalization, the percentage of holdings that are S&P 500 firms, the weighted average time since the stock was listed, the weighted average price per share, the weighted average earnings growth, the weighted average beta, the weighted average standard deviation of returns, the weighted average earnings to price ratio, the weighted average dividend yield, the weighted average book to price ratio, the percentage of holdings in firms with 5 consecutive years of earnings growth, the weighted average S&P stock rating, the percentage of holdings in firms with positive earnings and the weighted average debt to equity ratio.

large and small refer to the correlation with market capitalization, whilst value and growth refer to preferences for the conventional interpretations of the terms value stocks and growth stocks.

Because of the way in which the Bushee (1998, 2001) method exploits the data, it serves as a more consistent characterization of what a fiduciary entity really does. We therefore employ his taxonomy in all of our empirical tests. It is important to note that the two levels of the Bushee system are not substitutes. The categories transient, quasi-indexer and dedicated are relatively fixed and refer to a given institutions overall investment philosophy. The categories large value, large growth, small value and small growth refer to possibly temporary preferences for given stock characteristics.

1.4 The Endogeneity of Ownership

A major obstacle to drawing inference in ownership – performance studies is the problem of endogeneity, which may arise in either of the familiar forms; omitted variable bias and reverse causality. Therefore, for each test that we propose, we perform Fama-Macbeth (1973) regressions as an exploratory procedure. Thereafter, we account for unobserved heterogeneity by performing the same regressions using firm-level fixed effects analysis in a panel data setup. However, as Zhou (2001) noted, the problem with using fixed effects estimators in this context is that they rely on within firm variation to identify the relationship between firm value and ownership. Considering that the cross-sectional variation in ownership is far richer than that within each firm, using fixed effects may lead to a rejection of the performance ownership relation even if one exists.

Furthermore the fixed effects method will not get around the reverse causality problem. We therefore also implement an instrumental variables procedure.

The advantage in using an instrumental variables approach is that we can mitigate both sources of endogeneity. However, the drawback lies in assessing the validity of the instruments. Himmelberg, Hubbard and Palia (1999) suggest using the log of total assets, its square and the standard deviation of residuals from a CAPM regression as instruments for management ownership. Given that we have three different types of potential endogenous measures of institutional ownership, we incorporate their instruments and add four more of our own. Our final set includes the log of total assets, its square, the variance of residuals from a market model regression, beta from a market model regression, its square, and the error in analyst forecasts of EPS as of the previous fiscal year and its square.

2.1 Hypothesis Development

2.1.1 Institutional Demand for Equity Characteristics

Although the Bushee (1998, 2001) categories are not legal definitions, they are a useful guide to each institution's corporate mandate because of the way in which they are constructed. Transient institutions undertake investments that are intended to maximize short term gains. We therefore expect them to be most sensitive to fluctuations in the pattern of returns. To be truly effective in their trading activity, however, we also anticipate that they will seek out situations in which they can gain a competitive advantage over other investors in terms of information gathering. At the other end of the spectrum, dedicated institutions commit significant resources to a handful of firms and do

not sell off easily. Quasi-indexers are also substantially committed to their portfolio firms, however, they do have greater flexibility than dedicated investors in terms of when and how much they can sell. This suggests that dedicated and quasi-indexer institutions should be more concerned with firm characteristics that facilitate monitoring and firm-specific information acquisition. However, as quasi-indexers hold broader portfolios than dedicated institutions, they face higher costs of oversight. We therefore expect them to be attracted to firms in which it is easy to glean information to a greater extent than dedicated investors.

To complete the ownership picture, we also consider the role of insiders. There are many reasons to suggest that insiders should exhibit different demand for stocks in their own companies as compared to institutions. Firstly, a significant proportion of insider wealth is determined by labor income. This has the effect of dampening the demand for their own stocks as they attempt to hedge against future bad states. Institutions, of course, do not face this issue. Secondly, insiders may face more financial barriers in capital markets. We typically think of them as being more wealth constrained and consequently likely to face greater borrowing restrictions than institutions. Furthermore, legal considerations cause them to have short selling constraints in their own stocks (SEC rule 16(b))[4]. These considerations suggest that they maximize a different objective function to the large, comparatively less constrained financial institution. Thirdly, insiders are likely to be more information privileged relative to institutions. Although insider trading regulations limit what can be done with this information (SEC rules 10(b-5)[5] and 16(b)[6]), it would be naïve to think that it is of no

[4] Although it should be noted that 13(f) institutions also incur some restrictions with respect to short sales.
[5] Acting on information that is not publicly available.

value and has no bearing on insider behavior. For instance, Seyhun (1986) and Lakonishok and Lee (2001) demonstrate that insiders possess some ability to predict future returns. We therefore posit that insiders will be attracted to firm characteristics that obscure managerial action[7]. The reasons for this are twofold. Firstly, the more difficult it is to verify a managerial decision, the lower the probability of involuntary turnover in the event of a bad outcome. Secondly, even if an insider does not intend to willfully manipulate company resources to their own benefit, self interest will always make them prefer a situation in which this is possible. We therefore hypothesize the following:

H.1 *Investors exhibit heterogeneous preferences for security characteristics which exist because of the number of constraints that they face. Transient institutions face the least constraints and are most concerned with the properties of returns. Dedicated and quasi-indexer institutions are concerned with the cost of overseeing managerial behavior. Insiders are primarily motivated by concerns about personal wealth.*

In order to measure preferences for firm characteristics, we define generic share demand functions for all four investor clienteles. Our choice of right hand variables is motivated by the regressors used in similar studies and the desire to avoid simultaneity

---

[6] Engaging in roundtrip trades in under 6 months.

[7] With respect to the determinants of managerial shareholdings, we turn to Holderness, Kroszner and Sheehan (1999) as a guide. They find that firm size and leverage are negatively related to managerial ownership. The finding for size is reflective of wealth constraints whilst they argue that the leverage result is consistent with Stulz (1988). Stulz (1988) demonstrates that managers can use leverage to increase their voting rights for a given level of equity ownership. The other important finding in Holderness, Kroszner and Sheehan is that volatility as proxied by the residual from the market model regression has a non-linear effect on inside ownership. The coefficient on the level term is positive and the squared term is negative for the 1995 cross section of U.S. firms. Interestingly, they can not replicate this finding for the earlier (1935) cross-section. The authors interpret this as demonstrative of managers being more willing to commit significant personal equity towards their firms because of the wide variety of hedging products that have existed in financial markets in more recent times.

bias. To take a complete view of the firm's environment, we assign each of our control variables to one of three categories. The first group of variables deals with the relationship between risk and returns (size, book to market, beta and previous excess returns). The second group deals with characteristics that determine the relative opacity of the firm to outside investors (R&D, advertising, free cash flows, capital expenditures and market model residual variance). The third group, which is closely related to the second, deals with firm conditions that permit monitoring and discipline from the external market (leverage and the entrenchment index score). Naturally, there is some degree of overlap in their interpretation as proxies. However, we find that by proceeding in this manner, we are able to uncover some very compelling differences in the way in which institutional investors allocate their portfolios. Furthermore, these differences are a very plausible antecedent to the causal interpretation that we discuss later in the paper. The complete regression specification for *H.1* is as follows:

$$\begin{aligned} Ownership\%_{it} &= \alpha_0 + \alpha_1 \log(ASSETS)_{it} + \alpha_2 \log(B/M)_{it} + \alpha_3 BETA_{it-1} \\ &+ \alpha_4 EXRET3-12_{it} + \alpha_5 RD_{it} + \alpha_6 ADV_{it} + \alpha_7 EBITA_{it} + \alpha_8 CAPEX_{it} \\ &+ \alpha_9 RESIDVAR_{it-1} + \alpha_{10} LEVERAGE_{it} + \alpha_{11} EINDEX_{it} + \varepsilon_{it} \end{aligned} \quad (5)$$

log(ASSETS). Firm size is measured as the log of total assets at the end of fiscal year t. For insiders, the impact of firm size may be purely related to the manager's budget constraint. Larger firms require more resources to achieve a certain level of ownership. Size may also be a proxy for information asymmetry and the scope for moral hazard. Larger firms may have less information asymmetry because of the degree of scrutiny they receive from capital markets and rating agencies. We therefore predict a negative relationship between firm size and insider holdings. From the perspective of institutional

investors, we propose that firm size will be a desirable quality for those institutions that tend to engage in monitoring. The costs of monitoring decrease as firm size increases because it becomes a shared undertaking. Furthermore, size can act as a proxy for prudence and liquidity considerations. We therefore expect a positive coefficient on firm size for dedicated and quasi-indexer institutions. In contrast, transient institutions do not engage in any meaningful long term monitoring because of the rapid turnover of their portfolios. We therefore propose that these investors will seek out situations in which they can use their superior information gathering capabilities to extract gains. As a result, we conjecture a negative coefficient on the size variable for transient institutions.

log(B/M). We take the log of the book to market ratio at the end of fiscal year t. As proposed by Gompers and Metrick (2001), it is possible that institutional investors may be attracted to characteristics that have been shown to be associated with historical returns e.g. high book to market stocks earning higher returns than low book to market stocks[8]. However, a priori, the direction of the relationship is not clear-cut. If the book to market ratio represents a trading rule through which one can earn superior returns, the association should be positive across all types of institutional investor. If however, one interprets the book to market ratio as a rationally priced risk factor, then the relationship could be negative for some types. If high book to market firms are on average more distressed than low book to market firms, transient institutions might display an aversion towards that characteristic despite the potential for superior returns because of the mechanism through which those returns must be achieved. By virtue of the small size of their holdings and their short horizon, transient institutions have little incentive to monitor this type of firm and enforce long term operational changes. Furthermore, if

[8] Fama and French (1992, 1993).

growth (low book to market) firms have less precise information about their future earnings, then transient institutions should herd towards those firms because of their ability to exploit the information differential between themselves and the rest of the market. Therefore, we predict a negative coefficient on the book to market ratio in the transient regression. On the other hand, dedicated and quasi-indexer institutions (that by design become intimately knowledgeable about their target firms) might be willing to take on these distressed firms with a view to improving them. Therefore, we predict a positive coefficient for both quasi-indexer and dedicated institutional investors.

BETA. The beta coefficient from a market model regression is estimated. Pressure from their clients may cause transient institutions to be drawn to more "glamorous" stocks. We therefore predict a positive coefficient for beta in their demand function. We predict that dedicated institutions will not use beta as a primary criterion in making their assessment of the firms in which to invest and thus do not make a formal prediction with regards to their preference. Quasi-indexers will tend to weakly avoid both high and low beta stocks because they essentially hold the market portfolio. Consistent with Demsetz and Villalonga (2001), we posit a negative coefficient in the insider holdings regression.

EXRET3-12. We measure cumulative excess stock returns relative to the CRSP equal weighted index over a 9 month period. The terminal date for measurement is the beginning of the quarter over which we measure our ownership variables. This variable is intended to demonstrate if different investor classes use historical stock price performance to make future trades. We predict a positive coefficient in the transient regression. If so, this lends credence to our contention that they possess superior information which they are able to act upon. The long run focus of dedicated institutions

makes it unlikely that this factor will affect their holdings of stocks. Quasi-indexers may also be somewhat constrained in their ability to implement momentum style trading strategies.

R&D, ADV and CAPEX. We collect R&D expenditures at the end of each fiscal year and divide them by assets. Firms which do not report R&D expense in Compustat are assigned a value of zero. We collect advertising expenditures at the end of each fiscal year and divide them by assets. In like fashion, firms which do not report advertising expense in Compustat are assigned a value of zero. We collect capital expenditures at the end of the fiscal year and scale by assets. Following Himmelberg, Hubbard and Palia (1999), we consider the preceding three variables to be indicative of the scope for managerial discretion. R&D and advertising are examples of 'soft' investments because they do not directly produce a tangible good. Capital expenditure on the other hand produces an observable outcome and is thus less easy to manipulate. We therefore expect that firms with a greater emphasis towards intangible assets will be more prone to managerial indiscretion. Although R&D and advertising are both 'soft', we argue that advertising may be 'softer' than R&D. We acknowledge that both types of investment are subject to managerial malfeasance; however, in the case of R&D, it is arguable that the link from investment to outcome is more clearly defined. At a cost, outside investors can familiarize themselves with the technologies employed and assess the usefulness of a project in a more quantitative way. The success of an advertising campaign on the other hand is determined by a variety of factors including trends, culture, location and historical market positioning. All of these factors are arguably more difficult to place in a present value type framework. As has been our theme so far, we expect that insiders will

prefer the characteristic that gives them greater discretion (i.e. the softer investment) and institutions will avoid it to the degree that it runs counter to their investment objective. Therefore we expect a positive coefficient on advertising in the management regression. Bushee (2001) demonstrates that transient institutions may pressure management to cut R&D expenses in order to meet earnings targets. Therefore we expect transient institutions to be attracted to firms with high R&D because of the earnings cushion that it provides.

EBITA. We compute earnings before interest and taxes divided by assets in fiscal year t as our measure of free cash flows. Jensen (1986) and Lang, Stulz and Walkling (1991) find that firms with high free cash flows suffer more severe agency problems. From the perspective of a self-interested manager, a high level of free cash flow may be a desirable characteristic. However, free cash flows also may be indicative of good fundamentals. Institutions may therefore be attracted to firms with high EBITA. We include EBITA as a control variable.

RESIDVAR. The residual variance from the market model regression. Idiosyncratic risk may have some association with management's desire to own shares in their own companies. Demsetz and Lehn (1985) argue that firm specific risk is a proxy for the scope for managerial action, thereby making it a desirable quantity. If so, firm specific risk should have a positive coefficient in the managerial ownership regression. When we subdivide institutions according to type, they should differ in their preferences for firm specific risk according to their ability to collect and act on superior information. Therefore we propose that firm specific risk will have a positive effect on transient investor holdings. On the other hand, in the level, dedicated and quasi-indexer institutions

will avoid firms with high firm specific risk because it increases the cost of oversight. The coefficient should be more negative in the case of quasi-indexers because they face a higher monitoring cost than dedicated investors.

LEVERAGE. We calculate leverage as the fiscal year end sum of short term and long term debt scaled by assets. Leverage is a proxy for the degree of monitoring intensity because creditors provide an alternate mechanism by which managers can be disciplined. Leverage should therefore have a negative effect on institutional ownership as it lightens the burden of monitoring, particularly for those institutions that need assistance. Therefore, given that quasi-indexers face the highest cost of information acquisition, their holdings should have a negative association with the leverage variable. As transient institutions do not engage in monitoring in the conventional sense, we do not posit a role for this variable in their demand function. At the other end of the spectrum, dedicated institutions should not need assistance monitoring their target firms because of their narrow focus. We therefore predict that they will also not consider leverage in determining their optimal holdings of a given stock. If managers need to signal their commitment to firm performance by owning equity, leverage decreases the size of the ownership stake required. It is for this reason that we expect leverage to have a negative effect on insider demand for equities.

E-INDEX. The entrenchment index score[9]. This variable controls for differences in governance environment. It is comprised of six governance provisions that empower management, or, alternatively, discourage takeovers. These are: staggered boards, limits to shareholder amendments of bylaws, supermajority requirements for mergers, supermajority requirements for charter amendments, poison pills and golden parachutes.

[9] For further discussion, we refer the reader to Bebchuk, Cohen and Ferrell (2004).

2.1.2 Herding Behavior of Institutional Investors and Informed Trade

H.1 posits that differential preferences for equity characteristics are a consequence of the nature of investment activities that a given institution undertakes. We therefore seek to establish whether these investment activities have an effect on the target firms themselves. If institutions are engaged in the acquisition and processing of firm specific information, such activity could generate positive spillover effects to other market participants by making prices more informative. Within our framework, this effect should be most apparent in firms that experience an increase in holdings by dedicated institutional investors. It is arguable, however, that if transients are also proficient acquirers of information (as postulated in *H.1*), the same effect should hold true for them. Innovations in financial markets are easily duplicated, therefore whatever advantage a given transient investor has in a given stock cannot persist indefinitely. Consequently, a buildup of transient blocks should also, ultimately, reduce the opacity of a firm. Finally, if quasi-indexer institutions free ride on the monitoring activities of others, then their trades should be minimally associated with firm transparency. In summary, we contend that:

H.2A The accumulation of proficient information gathering shareholder blocks enhances the transparency of a firm.

Morck, Yeung and Yu (2000) and Durnev, Morck and Yeung (2004) make the case that the R^2 statistic from a market model regression proxies for the lack of price informativeness in a given stock. More recently, however, Kelly (2005), Griffin, Kelly,

and Nadari (2006) and Ashbaugh-Skaife, Gassen, and LaFond (2006) demonstrate that this argument does not comport with the established market microstructure findings of Shiller (1981), LeRoy and Porter (1981) and West (1988). Nor is it consistent with the empirical finding that mandated reductions in trading cost structure are associated with subsequent price stability, as per Jones and Seguin (1997) and Bessembinder and Rath (2002).

Kelly's (2005) study provides direct evidence that both higher trade costs and higher illiquidity are associated with a lower market model R^2. Additionally, he finds that larger firms, older firms and firms with less binding short-sale constraints have higher market model R^2 statistics. Following this line of literature, the current study contains tests to determine whether increases in shareholdings by each of the Bushee (1998, 2001) classes of institutional investor are associated with subsequent changes in R^2. The R^2 statistic is obtained by running annual regressions of daily individual stock returns against the market and the returns on the firm's 2-digit SIC industry excluding the firm itself, as follows:

$$R_{it} = \alpha_0 + \beta_{MKT,it} R_{MKT,t} + \beta_{IND,i \neq it} R_{IND,i \neq it} + \varepsilon_{it} \tag{6}$$

Having collected R^2 for each firm, we apply a logistic transformation and regress the transformed variable against changes in institutional ownership, the market value of equity, the number of years since the firm was first listed in CRSP, the number of analysts providing estimates of the firm's EPS in I/B/E/S and Amihud's (2002) measure

of illiquidity. The Amihud (2002) illiquidity measure is defined as the annual average of daily returns scaled by daily volume:

$$ILLIQ_{it} = \frac{1}{D_i} \times \sum_{t=1}^{T} \left[\frac{|R_{it}|}{Vol_{it}} \right] \tag{7}$$

The final regression specification is, therefore, as follows:

$$\ln\left(\frac{R^2}{1-R^2}\right)_{it} = \alpha_0 + \sum_{k=1}^{3} \alpha_k \Delta Ownership\%_{kit-1} + \alpha_4 SIZE_{it-1} + \alpha_5 AGE_{it-1} + \alpha_6 NUMEST_{it-1} + \alpha_7 ILLIQ_{it-1} \tag{8}$$

The level demand equations proposed in *H.1* identify static relationships. We now extend our model to incorporate the dynamics of trade. Beyond the 'fundamental' relationships proposed in *H.1*, some trading decisions will be made in response to the actions of others i.e. herding behavior. Broadly, herding arises out of the desire to avoid a negative outcome. For instance, institutional shareholders may prefer to act with the crowd (even in the face of negative signals) in order to avoid punishment from clients in the event that their contrarian decision does not pay off. Under conditions in which some participants have more refined information than others, relatively uninformed traders may mimic the trades of the informed in the hopes of earning superior returns.

In a study of U.S. mutual fund holdings over the period 1974-1994, Wermers (1999) finds that while overall herding by mutual funds is fairly low[10], herding in situations where information is imprecise is far more pronounced. Specifically, he finds

[10] Roughly 3 more funds out of every 100 trade on the buy side than would be expected if trading were completely random.

excessive herding by investment vehicles that characterize themselves as growth funds[11]. Furthermore, sell-side herding is concentrated in small stocks[12] across all investment style categories.

In this paper, we posit the existence of an information cascade. The management team should possess the most accurate information about the current state of their company by virtue of the fact that they observe operations on a continuous basis. Thereafter, we believe that transient institutions will be the second most informed about the future prospects of a firm. In general, transient institutional investors will be able to overcome the noise (relative to the management team) in their signal through the volume of trade that they are able to commit to a firm[13]. Furthermore, Ke and Petroni (2004) demonstrate that transient investors communicate directly and indirectly with management and appear to be able to forecast earnings declines at least one quarter before they take place, unlike dedicated and quasi-indexer types. However, dedicated institutions should also be very well informed because of their role as long term monitors of firm performance. Finally, quasi-indexer institutions should be the least informed because of the breadth of their holdings.

Empirically, we predict that dedicated institutions will not follow the trades of other investors. Primarily, this is because their investment mandate requires them to evaluate stocks based on characteristics beyond the short term holdings of others. By comparison, quasi-indexers have a need to acquire subsidized monitoring. We therefore predict that they will be the class most affected by other investors' trades. In particular, if dedicated institutions are more proficient monitors, the quasi-indexer class should tend to

[11] Investments in firms with uncertain future cash flows.
[12] This is also a proxy for information asymmetry.
[13] We explore this issue more thoroughly in *H.3.*

follow them into stocks. In some sense free-riding on the efforts of the dedicated. If this explanation holds and entrenchment has any validity, we also expect to see management tend to reduce their holdings in firms in which monitoring type institutions accumulate blocks. Under these conditions, insiders would no longer need to hold as many shares to credibly signal their commitment to outside investors.

The Ke and Petroni (2004) finding and the Bushee (2001) finding with respect to R&D expenditures[14] suggest that transient institutions act independently and have superior information gathering capabilities. However, as proposed in *H.2A*, the accumulation of shares by monitoring institutions may portend a change in the opacity of the firm. We therefore conjecture that transients will tend to herd out of securities in which long term investors have bought significant blocks. We summarize our predictions about the dynamics of trade in *H.2B*.

H.2B *Dedicated institutions make trading decisions that are independent of the other institutional investor classes. Quasi-indexer institutions incorporate the trades of investors with superior monitoring abilities in making their trading decisions. Transient institutions rely on their own research, but will avoid situations in which their informational advantage is diminished.*

To test this conjecture, we include the full set of control variables from the level demand functions in *H.1*, which leads us to the following expression[15]:

[14] Transient investors increase the probability of myopic R&D decisions.

[15] The subscript k references the three other investor classes relative to the class of interest. For instance, if k=1 denotes transient institutions then k=2, 3 and 4 correspond to the management team, quasi-indexers and dedicated institutions respectively.

$$\Delta Ownership\%_{kit} = \alpha_0 + \sum_{j=k}^{4} \alpha_j \Delta Ownership\%_{jit-1} + \alpha_5 \log(ASSETS)_{it-1}$$
$$+\alpha_6 \log(B/M)_{it-1} + \alpha_7 BETA_{it-1} + \alpha_8 EXRET3-12_{it-1} + \alpha_9 RD_{it-1}$$
$$+\alpha_{10} ADV_{it-1} + \alpha_{11} EBITA_{it-1} + \alpha_{12} CAPEX_{it-1} + \alpha_{13} RESIDVAR_{it-1}$$
$$+\alpha_{14} LEVERAGE_{it} + \alpha_{15} EINDEX_{it} + \varepsilon_{it} \quad (9)$$

Note that each of the control variables in the regression is expressed as of the previous fiscal year. Therefore, this regression is designed to answer the following question: contingent on observing the change in holdings of all other classes of investors last year, how does the class of interest respond this year?

2.1.3 The Link Between Ownership Structure and Returns

The implication of *H.1* and *H.2* is that there is not perfect agreement in the market for firm securities. This disagreement arises because of differential information and differential preferences for firm characteristics, leading to some degree of market segmentation. As we discussed in the introduction, managers face certain portfolio restrictions because of the structure of their compensation packages, and institutions are affected by prudence and liquidity concerns. Even in an equilibrium framework such as Merton's (1987) ICAPM, investors may express preferences for stocks that allow them to hedge uncertainty about future consumption-investment opportunities. Either way, the implication is that there exist determinants of the demand for stocks that are not accounted for in a standard CAPM framework. If this is correct, then we should expect to see that reflected in the returns accruing to stocks which possess the characteristics that produced the disparities in demand in the first place. We posit transient institutions as the

marginal price setter in the economy because of the aggregate size of their holdings and volume of shares that they can move at a single time.

Wermers (1999) performs a variety of future returns tests and finds that mutual fund herding does contain some predictive content for long term future performance. He finds that those stocks that are heavily bought by funds outperform those that are heavily sold for six months following the execution of the trade. After six months, the performance disparity declines but does not reverse. Furthermore, he finds that a zero investment portfolio strategy that buys stocks that experience the highest level of buy side herding and sells stocks that experience the highest level of sell side herding generates positive, size adjusted abnormal returns of 13% during the same quarter as portfolio formation and 4% over the following two quarters.

Nofsinger and Sias' (1999) definition of a herd differs from Wermers (1999) in that they are only concerned with the absolute change in the percentage of shares owned by institutions. When looking at contemporaneous returns, they find that those firms that experience the largest decrease in institutional ownership over the herding year earn abnormal returns of -13.12% whereas those firms that experience the largest increase in institutional ownership earn abnormal returns of 18.38%. Furthermore, when they extend their return horizon to 12 and 24 months after the herding year, they are unable to find any evidence of return reversals. The authors interpret their collected evidence as being consistent with institutions being both positive feedback traders and traders who purchase undervalued and sell overvalued stocks.

To the extent that transient investors are less constrained relative to the other two classes, they will be the most capable of trading in response to fluctuations in return

patterns. Since we are making the conjecture that transient institutional investors are the marginal price setter, we conclude that transient holdings should be associated with higher subsequent values of Q. We summarize this discussion in hypothesis *H.3*:

H.3 *Trading by transient institutional investors is associated with positive returns. The presence of transient institutions is associated with higher subsequent values of Tobin's Q.*

In order to test the first component of *H.3*, we regress individual monthly excess stock returns on both the previous and contemporaneous level of ownership by each of the four investor classes in separate specifications. As we already have a model in mind[16], we also include a test with a squared term in insider holdings. Finally, we partition transient holdings by investment style and perform the same regressions according to whether the institutions are categorized as value or growth type investors. In each regression specification, we include the control variables proposed in Brennan, Chordia and Subrahmanyam (1998). Variable definitions are provided in Table 7:

$$R_{it} = \alpha_0 + \sum_{k=1}^{3} \alpha_k Institution\%_{kit} + \alpha_4 MH_{it} + \alpha_5 MH_{it}^2 + \alpha_6 SIZE_{it} + \alpha_7 B/M_{it} + \alpha_8 NASDUM_{it} + \alpha_9 PRICE_{it} + \alpha_{10} NYDVOL_{it} + \alpha_{11} NASDVOL_{it} + \alpha_{12} YLD_{it} + \alpha_{13} RET2-3_{it} + \alpha_{14} RET4-6_{it} + \alpha_{15} RET7-12_{it} \quad (10)$$

In order to test the second component of *H.3*, we estimate the expression below[17]:

[16] McConnell and Servaes (1990, 1995, 2005)

[17] The subscript k=1,2,3 denotes transient, quasi-indexer and dedicated institution respectively.

$$Q_{it} = \alpha_{..} + \sum_{k=1}^{3} \alpha_k Institution\%_{kit} + \alpha_4 MH_{it} + \alpha_5 MH_{it}^2 + \alpha_6 RD_{it} + \alpha_7 ADV_{it}$$
$$+\alpha_8 LEVERAGE_{it} + \alpha_9 \log(ASSETS)_{it} \quad (11)$$

As a robustness check, we also consider the role of investment style with respect to transient institutions. If transient institutions tend to tilt their portfolios towards growth (which would tend to have higher Q's) versus value stocks[18] then one might expect to find a relationship between the two variables as a function of investment style. We therefore perform tests of Q against subcategories of transient ownership.

2.1.4 Conditional Interpretations of the Ownership – Firm Value Relationship

To this point, we have been working under the assumption that transient institutions possess more refined information about expected future cash flows and are more able to act on that information than either dedicated or quasi-indexer institutions. We also propose that managers have a preference for firms in which it is harder for their actions to be understood by the external market. Two types of institution are primarily concerned with the ability of management to act in ways that destroy long term firm value (quasi-indexers and dedicated), whilst transient institutions are more concerned with short term considerations such as recent stock price performance and liquidity. In order to complete the picture, we therefore consider three different scenarios that impact the ability of management to act and the ability of the external market to process the information about a firm. These are corporate governance, the expectation of the market (as proxied by the dispersion of analyst forecasts) and the volatility of cash flows.

[18] The results in Table 2 for the early part of the sample are suggestive of this.

Corporate governance rules provide the framework through which managers can act and also through which they can be disciplined. Bebchuk, Cohen and Ferrell (2004) construct an index of six corporate governance provisions that proxy for the strictness of a company's corporate charter. They find that higher scores of the entrenchment index (which corresponds to worse governance) are associated with lower values for Q. These results seem to suggest that governance matters. We expect to find similar results in that good governance should be associated with higher firm valuation. However, we also intend to make the case that a real source of discipline in the external market lies in the pressure of transient investors. Since they are the closest to the management team[19] and most capable of generating real effects through their trading decisions[20], we argue that they will continue to have an effect on firm value whereas the threat posed by the other two classes will be subsumed by whatever governance provisions the firm already has in place. Therefore, it is our contention that:

H.4 *The role of transient institutions in relation to Q is most pronounced under circumstances in which information about future earnings is imprecise.*

Notice that expressing *H.4* in terms of transient institutions does not lead to any loss of generality. An alternative formulation could easily express it from the perspective of quasi-indexer and/or dedicated institutions. In other words focusing on whether there are conditional circumstances under which the effect of monitoring institutions becomes apparent. Both formulations are answered in the tests that we propose. To test *H.4*, we initially add the entrenchment index score as an independent variable to the Q regression.

[19] Ke and Petroni (2004).
[20] For instance by abandoning the stock en masse.

Thereafter, to isolate any structural differences related to governance scores, we partition our data set into halves based on the level of the entrenchment index score. We then interact each ownership variable with the governance index half to which the firm belongs and re-run the Q regression.

$$Q_{it} = \alpha_0 + \sum_{k=1}^{3} \alpha_k Institution\%_{kit} + \sum_{k=1}^{3} \beta_k Institution\%_{kit} \times E - INDEX\_1$$
$$+\alpha_4 MH_{it} + \alpha_5 MH_{it}^2 + \alpha_6 RD_{it} + \alpha_7 ADV_{it} + \alpha_8 LEVERAGE_{it}$$
$$+\alpha_9 \log(ASSETS)_{it} \tag{12}$$

Investment analysts are an important intermediary between firms and individual investors. Their research and recommendations serve as a useful proxy for the market's overall expectation of a firm's future cash flows. Consequently, when there is considerable disagreement about future performance by professional analysts, it is reasonable to assume that the same holds true in the market at large. Following the same procedure used in equation (12), we partition our sample by the level of forecast dispersion and interact this dummy variable with the level of ownership.

$$Q_{it} = \alpha_0 + \sum_{k=1}^{3} \alpha_k Institution\%_{kit} + \sum_{k=1}^{3} \beta_k Institution\%_{kit} \times F - DISP\_1$$
$$+\alpha_4 MH_{it} + \alpha_5 MH_{it}^2 + \alpha_6 RD_{it} + \alpha_7 ADV_{it} + \alpha_8 LEVERAGE_{it}$$
$$+\alpha_9 \log(ASSETS)_{it} \tag{13}$$

The third set of conditional tests that we perform considers the role of cash flow volatility. We posit persistence in the time series patterns of cash flow volatility. Therefore, it should be harder to reliably forecast the future cash flows of firms with a higher existing level of cash flow volatility. If transient institutions are better informed

than other institutional investor classes, they should perform well under conditions in which cash flow volatility is high. We therefore anticipate that the interactions of transient holdings and cash flow volatility should have a positive effect on Q.

$$Q_{it} = \alpha_0 + \sum_{k=1}^{3} \alpha_k Institution\%_{kit} + \sum_{k=1}^{3} \beta_k Institution\%_{kit} \times CASHVOL\_1 + \alpha_4 MH_{it} + \alpha_5 MH_{it}^2 + \alpha_6 RD_{it} + \alpha_7 ADV_{it} + \alpha_8 LEVERAGE_{it} + \alpha_9 \log(ASSETS)_{it} \quad (14)$$

To take the information gathering hypothesis further, we perform subtests where we partition the ownership by transients according to investment style. If transient institutions excel when the information differential between themselves and the rest of the market is high, then investment style should have an effect on Q. Smaller firms and firms with growth characteristics have less precise information about expected future cash flows. Therefore, there should be a positive association between the presence of transient institutions pursuing a growth style and firm value. This test also serves as a robustness check. If value style transient institutions are found to have a positive effect on Q, then we can reasonably conclude that the proposed relationship is not purely driven by portfolio strategies that overweight growth (presumably high Q) stocks.

3.1 Data and Descriptive Statistics

We initially construct our dataset by selecting all firms for which we can obtain complete corporate ownership data. Institutional holdings are obtained from the Thomson Financial Securities Ownership Database, which itself is derived from records of SEC form 13(f). Form 13(f) must be filed quarterly by all investment managers who exercise

control over at least $100 million in securities. With respect to common stocks, form 13(f) contains all positions greater than 10,000 shares or $200,000.

In order to reconcile the annual insider ownership data with the quarterly institutional data, we use a two month window in merging the two databases. In other words, if a firm has a fiscal year ending that does not exactly match a quarterly institutional filing date, we use the holdings of institutions from the previous quarter, provided that the previous quarter is less than two months prior. We acknowledge that this reduces the accuracy of our ownership measures. However, we find that only a few observations are off by 60 days in an annual regression framework. Furthermore, the results remain the same when we re-run the analyses using only the firms which coincide perfectly in ownership reporting dates.

Having collected a complete panel of ownership data, we then label each institution according to the categories defined in Bushee (1998, 2001). Around 60% of the institutions tracked by Thomson Financial are defined as quasi-indexers. Transients make up the second largest group, with around 6% being counted as dedicated.

On average, transient institutions turn over their portfolios almost three times as much as dedicated and quasi-indexer institutions. The quarterly turnover percentages are 8.91%, 7.65% and 23.84% for dedicated, quasi-indexer and transient investors respectively. Transient institutions only hold around 44% of their portfolio firms for two years or more whilst dedicated and quasi-indexer investors hold around 70% of their firms for long periods (more than 8 consecutive calendar quarters). Dedicated institutions hold much larger blocks (average of 4.1% of the target firm vs. 0.5% for quasi-indexers and 0.8% for transients) and much larger firms (average market capitalization of $24.3

billion vs. $6.9 billion for quasi-indexers and $7.9 for transients) than either of the other two classes of investor. For more detail on the properties of the taxonomy we refer the reader to Bushee (2001).

Our insider ownership variables are taken from the Standard and Poor's Executive Compensation Database (EXECUCOMP) for the fiscal years 1992 to 2003. The data cover annual holdings by insiders in firms listed on the NYSE, NASDAQ and AMEX. The Securities and Exchange Commission's (SEC) defines an insider as an officer, director or 10% principal stockholder who owns either 1,000 shares or at least $25,000 in equity securities[21]. The EXECUCOMP database does not include the holdings of 10% principal holders who are neither officers nor directors. As a result, it uses a stricter definition of insider i.e. only those who are actually affiliated with the company. Because of this artifact, we use the terms insider holdings and managerial ownership interchangeably.

In addition to having data on ownership, we require that our firms have accounting data on Compustat and market data on CRSP for the same years that we have data on their shareholdings. Tobin's Q is winsorized at the 5% and 95% level to prevent the results from being dominated by outliers. Finally, we require that the firms are followed by at least three analysts throughout the sample period. We obtain measures of analyst forecast error and analyst forecast dispersion from the I/B/E/S database. Forecast error is measured as the absolute value of the difference between the last mean estimate of EPS and the actual fiscal year end realized value of EPS. Forecast dispersion is

[21] Insider holdings are collected from SEC forms 3 and 4. Form 3 is the initial filing related to the acquisition of equity securities by an insider. It must be filed within 10 days of the purchase. Subsequent changes in ownership by insiders are reported on Form 4. Form 4 must be filed within the first 10 days of the month after which the transaction occurred.

computed as the standard deviation of the last forecast of EPS for a given fiscal year. These selection criteria produce an unbalanced panel of 2,609 firm years. Table 1 gives summary statistics for the main variables used in the study.

The results in Table 1 show that the sample consists of fairly large, well performing stocks. Average Tobin's Q exceeds 2 for seven of the twelve years in our study. The average beta is around 1.30 throughout the sample period. Average firm size measured by both market capitalization and total assets increases dramatically (85.70% and 54.97% respectively) over the sample period. The leverage ratio is fairly constant around 20% for all twelve years. Expenditures on R&D and advertising remain close throughout the sample.

Average ownership by insiders displays a steady decline from a 6.84% in 1992 to a low of 4.31 % in 2003. On the institutional side, the percentage of shares held by transient investors becomes increasingly important in the later years of the sample. Their holdings average 9.41% in 1992 and increase to 23.8% by the end of the sample with a peak of 36.41 % in 2001. Quasi-indexers do not change their holdings by much, consistently accounting for around one third of firm ownership. Finally, dedicated investors increase their average holdings over the first six years (from 12.72% in 1992 to 19.85% in 1997) and then experience a sharp decline (1.08 % in 1998) before recovering towards the end of the sample (10.44% in 2003).

In Table 2, we investigate the distribution of institutional ownership by investment style. Table 2 shows a joint characterization of all the institutions on the Thomson Financial database according to both layers of the Bushee (1998, 2001) taxonomy. For instance, the first row shows the number and percentage of dedicated

institutions that are classified as following a large growth, large value, small growth and small value trading strategy respectively in the year 1992.

In the first half of the sample, transient institutions appear to exhibit a deliberate bias towards stocks in the growth category. For four out of the first six years, allocations to small growth and large growth stocks come in first and second place in terms of portfolio weight. While the importance of the large growth category fades away in later years, the importance of the small growth category to transient investors continues into 2003. From 1998 onwards, the small value category becomes increasingly important as over 30% of transients are routinely characterized as following a small value strategy.

1998 also represents a remarkable turning point in the trading strategy of dedicated institutions. They appear to abandon the large value and large growth categories altogether and begin to aggressively pursue a small value approach. Notice also that this shift coincides with a sharp decline in the total number of institutions characterized as dedicated (from 157 in 1997 to only 23 in 1998). This corresponds closely to the decline in the overall share of market value held by dedicated institutions shown in Table 1.

As one might expect, the holdings by quasi-indexers exhibit the most stability. Around 60%-70% of quasi-indexers are either large growth or large value institutions in every year. Since quasi-indexers essentially hold the market portfolio, we would expect them to have a bias towards larger stocks and, moreover, that the proportions they select would change very gradually.

Table 3 presents some preliminary results on the preferences that the different classes of investors have for stock characteristics. Holdings by transient institutional

investors are significantly positively correlated with prior returns, systematic risk as measured by beta, and firm specific risk as measured by the residual variance from the market model regression. On the other hand, the book to market ratio exhibits a negative correlation with transient ownership. This seems to suggest that transient institutions herd towards "glamour" stocks. They also display a negative correlation with stocks with heavy long term investment as measured by capital expenditures.

In terms of discretionary investments, the correlation with R&D is positive whilst advertising is negative. Transient ownership is also associated with higher levels of cash flow volatility. In contrast, quasi-indexers, dedicated investors and insiders exhibit significant negative correlation with this variable. Finally, transient holdings exhibit negative correlation with measures of analyst uncertainty i.e. forecast error and forecast dispersion. The holdings of the dedicated class of investors are only weakly correlated with measures of systematic risk. However, they do show a highly significant negative correlation with residual variance. In terms of discretionary spending, advertising is positively correlated with the dedicated class. Availability of free cash flows is also shown to have some importance whilst forecast dispersion has a positive association with dedicated ownership.

The directions and significance of the correlations with the quasi-indexer class mirror the dedicated class fairly closely (typically in a more pronounced manner both in magnitude and statistical significance) with one important exception. Quasi-indexer holdings are positively correlated with entrenchment index scores. Recall that higher index scores are associated with worse governance.

Management holdings are significantly negatively correlated with size, beta, leverage, residual variance, R&D and the entrenchment index. Their holdings are positively associated with free cash flows and capital expenditures. Although Table 3 is a simple correlation matrix it is nonetheless suggestive of the preferences we propose in *H.1*. We explore the interpretations of these associations more fully in the multiple regression framework of section 4.1.

4.1 Results

4.1.1 Testing the Institutional Equity Preferences Hypothesis

The first specification aims to undercover the forms of the demand functions that different groups of investors have for stocks. In order to test hypothesis *H.1*, both Fama-Macbeth (1973) and fixed effects regressions in which the percentage of shares held by each class of investor is the dependent variable are performed. Tables 4 through 8 present the results with the respect to *H.1*. The Fama-Macbeth procedure involves estimating each equation in *H.1* for each year (1992-2003) and then calculating the mean and time series standard deviation of the 12 estimates of the coefficients. The fixed effects procedure occurs at the firm level. We structure our regressions in a stepwise fashion based on the three groups of stock characteristics proposed in *H.1*.

Given the problem of unobserved heterogeneity, and limitations in the length of the time series, we believe that the firm-level fixed effects are a more appropriate technique. The Fama-Macbeth results should therefore be considered as a preliminary investigation of the underlying patterns that we hypothesize. However, as this study builds on Gompers and Metrick (2001), the Fama-Macbeth (1973) regressions allow for

comparability. Nonetheless, in discussing the results below, the fixed effects coefficient estimates will be accorded prominence over the Fama-Macbeth (1973) coefficient estimates.

The results in Table 4 show that firm size, prior excess returns and market model residual variance have a statistically significant positive effect on aggregate institutional ownership. With respect to insiders, firm size, R&D expenditure and entrenchment index score are consistently associated with lower levels of management ownership. On the other hand, advertising expense has a statistically significant positive effect. As hypothesized, the finding with respect to firm size is probably related to the wealth constraints faced by individual managers. In terms of potential manipulation of corporate resources, we find that management's preference for firms in which advertising is high but research and development expense is low is consistent with the "softer investment" explanation proposed in *H.1*. In other words, investment in advertising may provide more amenity potential[22] to management than R&D. The negative effect of the governance index is likely reflective of the fact that a firm with more entrenching provisions would require a lower level of holdings to insulate management from external discipline.

When institutional investors are separated according to type, some important differences emerge. In general, there is considerable support for *H.1*. Table 6 shows that transient institutional investors hold stocks that have experienced good recent excess returns, have lower book to market ratios and a high residual variance. This suggests that while they are positive feedback traders, they are also attracted to firms that are harder to place within a valuation framework. The coefficient on the book to market may be

[22] The use of corporate resources to pursue objectives that enhance (often non-monetary) individual utility but have no beneficial spillover effects to outsiders. See Demsetz and Lehn (1985).

indicative of differences in investment styles. Higher book to market stocks or value stocks are less "glamorous" than growth stocks. Such stocks may not fit the criteria demanded by transients, who turn over their portfolios frequently and have to justify this frequent activity to the clients on whose behalf they trade.

In Table 7, the quasi-indexer group is found to take larger positions in stocks that have experienced poor returns in the prior 9 months. This is indicative of them being negative feedback traders. At the other extreme, in Table 8, dedicated institutions are completely indifferent to recent stock price performance. Given the long term focus of these types of institutions, this result is not surprising. Since they are invested in their target firms for the long haul, they are less inclined to respond to temporary fluctuations in market performance. In terms of the information acquisition specifications, dedicated institutions display a strong aversion to firms with high unsystematic risk as measured by the variance of the residual from the market model regression. However, quasi-indexers avoid these firms to an even greater extent than dedicated institutions (the negative coefficient is more than twice as large in the Fama-Macbeth specification).

Modern portfolio theory implies that this unsystematic risk component should be diversifiable and should not impact the decision on whether to invest in a particular stock. The finding of a strong negative relationship therefore suggests that the dedicated and quasi-indexer portfolios do not span the market. This corroborates our argument that those institutions that are inclined to perform long term monitoring tend to avoid those situations in which it is expected to be most costly. The fact that this aversion is stronger in quasi-indexers is suggestive of a differing cost structure between the two groups. Given that they hold more diversified portfolios than the dedicated class, their marginal

cost of monitoring is likely higher and thus they are affected by this consideration to a greater extent. This contention is also borne out in the coefficients on the leverage ratio. Leverage negatively affects quasi-indexer holdings, but not dedicated ownership. This is to be expected if leverage is a form of subsidized monitoring that lessens the size of the stake required for effective oversight.

Both transients and quasi-indexers are attracted to firms with high EBITA. While EBITA is conditionally associated with the free cash flow problem, it is also indicative of good fundamentals; therefore, it is not surprising that both groups find this to be a desirable quality. It is interesting to contrast this finding with the earlier finding that dedicated institutions are unconcerned with good historical market performance and that quasi-indexers even appear to avoid it to some extent.

4.1.2 Testing the Herding and Informed Trade Hypothesis

With respect to the common control variables, the results displayed in Table 9 are broadly consistent with Kelly (2005). Firm size and age are found to have a positive association with R^2. Given these variables extensive use as proxies for information asymmetry[23] in corporate finance research, this lends credence to the interpretation of R^2 as an inverse measure of firm opacity. On average, the four specifications explain over 32.4% of the variation in the log-transformed coefficient of determination.

In terms of the unique right hand side variables, the parsimonious specification in the first column of Table 9 suggests that changes in transient institutional ownership have limited association with subsequent firm transparency. In the second and third columns, it

[23] Himmelberg, Hubbard and Palia (1999).

appears as though increases in quasi-indexer ownership negatively forecast transparency, whilst dedicated accumulations predict higher future transparency. With the exception of the dedicated class, these findings change in the full specification. The coefficient on the change in transient ownership remains positive, but becomes strongly statistically significant. Meanwhile the change in quasi-indexer variable loses its statistical significance and reverses sign. The dedicated result is strongly persistent, retaining its statistical significance, magnitude and direction. The differences between the full and parsimonious results are suggestive of omitted variable bias.

With reference to *H.2B*, column 4 of Table 9 provides evidence in support of the spillover effect from information gathering. The information gathering activities of dedicated investors enhance firm transparency as reflected by the improved fit of the market model regression. In contrast, because quasi-indexers can not observe their target firms with the same degree of scrutiny, their trading actions do not have an appreciable marginal effect on the quality of information produced. The positive transient coefficient is considerably smaller in magnitude than the dedicated coefficient[24]. This is also consistent with *H.2B* in that the transient information gathering process ultimately becomes available to the market at large, despite their preference for firm opacity. The preference for opacity and the probable bias[25] in the nature of the firm specific information that transient investors collect also explains the smaller economic impact of their actions when contrasted with the dedicated class.

The tests in section 4.1.1 reveal a positive association between lagged returns and institutional holdings and also provide new insight into how investor heterogeneity

[24] The effect of changes in dedicated ownership is over four times as large as changes in transient.
[25] A greater focus on short term considerations.

affects this relationship. Transient institutions prefer good recent performance, quasi-indexers prefer poor recent performance and dedicated institutions and insiders are indifferent to previous returns. Because of the summing up constraint with respect to shares held, we could only examine one type of ownership at a time. Placing other ownership classes as right hand side variables would lead to spurious regression results[26].

In order to understand how the different types of ownership interact with each other, we perform a series of linear Granger causality tests of changes in ownership on lagged changes in ownership. We compute the change in holdings over the course of each fiscal year for each class of investor. Notice that using first differences and their lags causes us to drop the first two time periods (1992 and 1993). Tables 10 and 11 present the results of performing this procedure for all institutions as a group and corporate insiders. Tables 11 through 14 show the results for decomposed institutional ownership. For each of the three types of institution, two specifications of their change in demand functions are considered; a parsimonious version that relates their trades to insiders only and a full specification in which the trades of all classes are included. The gains in adjusted R^2 in the full system suggest that this is the more appropriate one from which to draw inference.

The first two columns of Table 11 indicate the difficulty in generating reliable predictors of portfolio rebalancing by individual investors based on firm (accounting and financial) characteristics. Only the excess returns variable is significant at conventional levels. The dynamics with respect to other investors, shown in columns 3 and 4 of Table 11, reveal a rich set of interactions however. Lagged purchases by both quasi-indexers

[26] For instance, a firm with 99% dedicated ownership by definition has low ownership by all other classes.

and dedicated institutions forecast future sales by the management team. If the demand functions are interpreted literally, this suggests that the arrival of longer horizon investors produces a change in environment that may make it unfavorable or unnecessary for managers to maintain large positions.

Two explanations are consistent with this result. A heavy build up of long term block-holders could signal increased monitoring intensity. The transparency result with respect to dedicated investors in Table 9, and the entrenchment index result with respect to quasi-indexers in Table 7 corroborate this proposition. In the face of increased external scrutiny, insiders become less able to manipulate corporate resources for personal gain. The reduced scope for malfeasance would have the effect of increasing the importance of portfolio diversification considerations for an insider who is over weighted in their own company's stock. One would therefore expect such an insider to reduce their holdings in the firm. Alternatively, under the assumption of incentive alignment, it could be the case that managers no longer need to hold as many shares (to signal their commitment to outside shareholders) when monitoring institutions arrive.

H.2A proposes that the arrival of monitoring institutions has consequences for the information asymmetry of a firm. Firms that attract the attention of dedicated institutions become more transparent to the market. *H.1* and by extension, *H.2B*, suggest that transients should avoid these situations. This is shown to be the case in Table 12. The accumulation of dedicated blocks forecasts sales by transients in the following year. The lack of statistical significance on the quasi-indexer variable combined with the result that quasi-indexers do not increase firm transparency provides further support for *H.2B*.

All three types of institution tend to engage in trading reversals. In other words, the coefficients on their own lagged changes are negative. We interpret this as meaning that they all trade to achieve a certain outcome and once it has been achieved they abandon the stock. In the case of transients, the explanation appears to be fairly straightforward. Per the evidence presented thus far, they herd towards stocks with good recent market performance (positive significant in both the level and change regressions) but have opaque or imprecise information about their operating environment. Following their arrival, these stocks continue to perform well, at which point they sell and repeat the process elsewhere[27].

In contrast, the case of dedicated and quasi-indexers reveals a different dynamic. As discussed earlier, the arrival of dedicated and subsequently, quasi-indexer investors appears to reflect a change in operating environment. It is therefore possible that the quasi-indexers use the dedicated class to identify stocks and act as the initial proponents of increased monitoring. Once the dedicated class has established itself, quasi-indexers attempt to free-ride on the improvement generated. As such, the lagged dedicated change variable enters positively in the lagged quasi-indexer regression. This is consistent with the information cascade proposed earlier. Indeed, there is even a role for prudent man considerations here. The presence of dedicated investors may serve as a form of certification, thereby insulating quasi-indexers from negative repercussions in the event of an unsuccessful investment decision. With respect to the other control variables, the direction and statistical significance remains the same in both the parsimonious and full specifications.

[27] With their exit being hastened by dedicated investor attention.

4.1.3 Testing the Ownership Structure - Firm Value Hypothesis

Hypothesis *H.3* posits a role for transient institutions as the marginal price setter in the market. In order to test this conjecture, we use the Brennan, Chordia and Subrahmanyam (1998) method of performance attribution and present the results in tables 15 through 17. By regressing monthly excess individual stock returns on both contemporaneous and lagged institutional holdings, we find that the contemporaneous measure is significant. However, this positive relationship is entirely driven by the effect of transient institutions. Furthermore, the effect is particularly concentrated amongst those transient institutions that pursue growth trading strategies. The insider ownership regression lacks statistical significance at conventional levels, nonetheless, it is interesting to note that insider ownership has a positive coefficient whilst squared insider ownership has a negative coefficient. The relevance of this finding will become more apparent when we perform a test of the McConnell and Servaes (1990. 1995) model in the next section.

The lack of significance in the lag ownership terms indicates that this relationship does not represent an unambiguous trading rule through which one can earn superior returns. Given that the highest frequency data available based on 13(f) filings is quarterly, this is to be expected. However, the new finding here is that only transient institutions matter in establishing price levels. Furthermore, transient institutions excel in situations under which information is most imprecise i.e. those transient institutions that track growth firms.

Turning to the firm value relationship, we use the McConnell and Servaes (1990, 1995, 2005) model because it is widely recognized in the performance – ownership literature and has been extensively tested by researchers on both sides of the debate. The first two papers in the McConnell and Servaes series use single year cross sections. The third paper uses a first differencing panel data approach. We attempt to replicate the McConnell and Servaes (1990, 1995) findings using all of the years in our sample in both a Fama-Macbeth (1973) and panel data setup. For each year, regressions of Q on management holdings, management holdings squared, institutional holdings, R&D, advertising, leverage and firm size are performed. If the patterns first identified by McConnell and Servaes (1990) are persistent, they should be detectable throughout the sample years. The chosen panel data methods are both fixed effects and instrumental variables. To instrument for ownership, we use the log of total assets, its square, beta from the market model regression, its square, the residual variance from the market model regression, the I/B/E/S reported analyst forecast error of EPS as of the end of the previous fiscal year and its square.

Column 1 of Table 18 essentially replicates the findings of McConnell and Servaes (1990, 1995). The coefficients on the insider holdings terms confirm the characteristic inverted 'U' shaped relationship between ownership structure and firm value. However, when ownership is modeled as endogenous in column 2, this effect disappears. Aggregate institutional ownership enters linearly in a positive and significant way in both the Fama-Macbeth (1973) and fixed effects specifications. Research and development expenditures and advertising are both positively associated with firm value. The coefficient on leverage shows that firms with more debt have lower Q values. Higher

leverage may be an indicator of financial distress, the costs of which are reflected in lower firm valuation. Finally, as expected, the entrenchment index score is shown to be a negative predictor for Q indicating that firms with more manager friendly rules have lower valuations.

Without controlling for governance, it appears as though the holdings of quasi-indexers and transient institutions weakly offset each other (quasi-indexer significance at the 10% level in the Fama-Macbeth (1973) regression), while the dedicated class has no effect on Q. When we control for governance, the quasi-indexer variable loses statistical significance, leaving only the transient coefficient positive. Furthermore, this offsetting effect can only be found in a correlation sense (Fama-Macbeth (1973) regression). In contrast, the dominance of the transient coefficient persists in all specifications. Upon performing the instrumental variables procedure, shown in column 1 of Table 19, the overall pattern still obtains. Transient holdings enter the Q regression in a positive fashion. Although the economic significance of some of the ownership coefficients becomes inflated, the most egregious cases (dedicated and management ownership) are statistically insignificant. The problems raised about the difficulties in finding good instruments is reflected in the decline in the goodness of fit (R^2 falls to around 7%). However, the consistency of the instrumental variables approach with both the Fama-Macbeth (1973) and fixed effects regressions is tentatively suggestive of causality.

A natural question at this point is whether the results presented are partially a function of investment style. If transient institutions are attracted to lower book to market stocks, one might expect to see their ownership being mechanically associated with higher Q's. To address this issue, Table 19 also contains a regression in which transient

ownership is subdivided by preferences for growth vs. value characteristics. In this case a "success" is defined as a positive coefficient on either of the value categories. We find that the presence of transients following a large value investment strategy is also associated with higher Q's.

4.1.4 Conditional Firm Value Tests

As informative as these results are, they are not a sufficient basis on which to completely dismiss the role of the dedicated and quasi-indexer classes. We therefore consider the conditional aspects of the relationship between Q and our measures of ownership. Three conditional variations of the Q regression are considered. Firstly, how the relationship might vary depending on the strength of the governance environment. Secondly, how the relationship may be affected by the general expectations of the market, and finally, how the relationship may vary according to the volatility of cash flows.

To implement the first test, the sample is divided in half according to the level of the entrenchment index score and each firm's grouping is interacted with the level of its institutional ownership variables. For the second conditional relationship, the institutional ownership variables are interacted with membership in the top half by analyst forecast dispersion. Finally, to assess differential effects of cash flow volatility, the ownership variables are interacted with membership in the top half of the sample by standard deviation of EBITA over the previous five years. Table 20 presents results. In all three conditional specifications, the level of transient holdings remains significantly positive.

The only specification in which the interaction terms are significant is the cash flow one. The effect of transients is incrementally higher when cash flow volatility is high. We view these results as further support for the importance of transient institutions as the marginal price setter in the economy. Interestingly, the dedicated interaction is also positive. Nonetheless, the overall picture remains consistent. The level of dedicated and quasi-indexer ownership is not associated with firm value in a systematic fashion. Even when we allow ownership to have differential effects based on deleterious corporate governance provisions, those institutions that we typically think of as monitors, have little predictable effect on firm value.

5.1 Summary and Conclusions

The major innovation in this paper lies in the way that we are able to analyze the importance of multiple ownership structure configurations. We use more comprehensive data than previous studies in this area in terms of the number of years and the types of ownership considered. By taking into account differences in demand for equity characteristics, we feel that we approach something closer to the reality of how securities markets operate. We find that transient institutional investors display a preference for firms that have good market adjusted performance and imprecise information concerning their expected future cash flows. On the other hand, dedicated and quasi-indexer institutions tend to avoid stocks with high firm specific risk and imprecise information. This suggests that these two classes of investor are more concerned with firm characteristics that facilitate monitoring. We also consider the role of insiders and find that they exhibit some attraction to features that obscure managerial behavior. For

instance, they express a strong preference for discretionary expenditures in the form of advertising.

Having isolated the different demand specifications, we then investigate whether they have any bearing on firm value. We demonstrate that the presence of transient institutional investors is strongly contemporaneously associated with higher returns and as a consequence, with higher subsequent firm values (as measured by Tobin's Q). Although we do find evidence that suggests that the arrival of dedicated institutions enhances firm transparency, neither of the two types of institutions with longer investment horizons (dedicated and quasi-indexer) are systematically associated with either returns or firm value. The pervasive result of this essay is that transient institutions have some inherent advantage over other classes of investors in terms of locating profitable investment opportunities.

We therefore conduct a series of conditional tests to determine if transient preferences with regards to information precision facilitate this advantage. We confirm that their preference for conditions under which firm specific information is imprecise or hard to process has a relationship with firm value. In particular, transient institutional ownership is positively associated with firm value when cash flow volatility is high and when they pursue an investment strategy that favors stocks with high background noise about future earnings. This provides further support for the contention that transient institutions possess superior ability in terms of collecting and processing the information about the firms in which they invest.

This result is particularly interesting because of the limited significance of long term monitoring institutions (dedicated and quasi-indexers) with respect to firm value,

even under the conditional specifications that explicitly include governance. This suggests that the conventional wisdom about the role of monitoring by outside investors needs extension. The activity of transient institutions should also have some influence on the nature of contracts formed between managers and outside investors. We feel that this represents a compelling area for further investigation. The patterns we identify are robust to both a fixed effects and an instrumental variables technique that models ownership as endogenous. In addition to confirming the strength of our findings, we also take this as a cue to further examine the role of causality.

APPENDIX

TABULATED RESULTS

Table 1
Summary Statistics

Table 1 contains descriptive statistics of the key variables used to test our hypotheses. Tobin's Q is measured as the market value of equity (Compustat item 199 x Compustat item 25) plus the book value of assets (Compustat item 6) minus the book value of common equity including deferred taxes (Compustat items 60 and 74) all divided by the book value of assets. BETA and RESIDVAR are the beta and residual variance estimates from a market model regression with a terminal date one year before the current fiscal year. For inclusion in this estimation procedure, we require that a firm has at least 110 days of returns data on CRSP prior to the terminal date. MH%, TRA%, QIX% and DED% refer to the fraction of outstanding shares held by management, transient, quasi-indexer and dedicated institutional shareholders respectively at the end of the fiscal year. LEVERAGE is the ratio of long term debt plus short term debt to total assets at the end of the fiscal year. B/M is the book value of common equity divided by market value of common equity at the end of the fiscal year. RD and ADV refer to fiscal year end research and development and advertising expense scaled by total assets respectively. Firms which do not report R&D or advertising in Compustat are assigned a value of 0. F-DISP is the I/B/E/S reported standard deviation of analyst forecast estimates of the current fiscal year's earnings per share (EPS). F-ERROR is the difference between the I/B/E/S calculated mean estimate of EPS and the realized value of EPS. When there are multiple observations of both of these variables for a given fiscal year, we use the one taken closest to the end of the fiscal year. CASHVOL is the standard deviation of the previous 5 years earnings before interest and taxes. E-INDEX is the fiscal year end entrenchment index score from Bebchuk, Cohen and Ferrell (2004). For years in which no entrenchment index score was reported, we use the previous year's value. The index ranges from 0 to 6 with one point being added for each governance provision that favors management.

Table 1

Panel A (1992 – 1997)							
Year		**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Q	Mean	1.865	2.039	1.896	1.981	1.995	2.014
	Std dev	0.930	0.918	0.885	0.887	0.946	0.910
	N	95	180	198	193	182	164
Market capitalization	Mean	2027	1802	1871	1724	2285	2793
($ Millions)	Std dev	5665	4743	5060	2751	4127	4283
	N	95	180	198	193	182	164
BETA	Mean	1.330	1.307	1.276	1.299	1.353	1.121
	Std dev	0.578	0.724	0.769	0.616	0.879	0.561
	N	95	180	198	193	182	164
RESIDVAR	Mean	0.022	0.022	0.021	0.021	0.021	0.022
	Std dev	0.007	0.007	0.008	0.007	0.007	0.085
	N	95	180	198	193	182	164
MH%	Mean	6.84	7.15	6.49	6.84	6.09	6.05
	Std dev	9.62	10.39	9.95	8.87	8.32	7.98
	N	95	180	198	193	182	164
TRA%	Mean	9.41	10.44	8.95	11.88	10.48	11.48
	Std dev	6.23	8.41	7.54	9.57	7.56	7.59
	N	95	180	198	193	182	164
QIX%	Mean	33.18	31.06	29.68	27.52	26.05	26.92
	Std dev	10.44	10.60	9.35	8.74	8.69	8.47
	N	95	180	198	193	182	164
DED%	Mean	12.72	13.69	17.91	17.70	18.95	19.85
	Std dev	8.99	8.61	8.83	9.44	9.26	9.78
	N	95	180	198	193	182	164
Total assets	Mean	1670	1231	1491	1422	1932	2328
($ Millions)	Std dev	2414	1986	2266	2019	4124	4183
	N	95	180	198	193	182	164
LEVERAGE	Mean	0.209	0.189	0.207	0.193	0.219	0.224
	Std dev	0.169	0.175	0.171	0.165	0.192	0.165
	N	95	180	198	193	180	161
B/M	Mean	0.521	0.450	0.496	0.468	0.474	0.437
	Std dev	0.286	0.212	0.252	0.242	0.256	0.213
	N	95	179	198	193	180	163
R&D	Mean	0.034	0.038	0.036	0.037	0.040	0.034
	Std dev	0.052	0.057	0.060	0.055	0.062	0.057
	N	90	167	198	175	168	149

Table 1 (cont'd)

Year		1992	1993	1994	1995	1996	1997
ADV	Mean	0.021	0.024	0.014	0.009	0.011	0.008
	Std dev	0.034	0.051	0.037	0.044	0.049	0.023
	N	51	115	170	187	178	163
F-DISP	Mean	0.040	0.049	0.050	0.053	0.053	0.043
	Std dev	0.044	0.073	0.079	0.112	0.108	0.056
	N	95	180	198	193	182	164
F-ERROR	Mean	0.083	0.068	0.068	0.064	0.099	0.073
	Std dev	0.134	0.138	0.123	0.143	0.344	0.173
	N	95	180	198	193	182	164
CASHVOL	Mean	0.033	0.037	0.033	0.035	0.037	0.034
	Std dev	0.026	0.032	0.027	0.029	0.037	0.028
	N	94	176	195	182	176	162
E-INDEX	Mean	2.12	2.19	2.29	2.19	2.23	2.19
	Std dev	1.43	1.47	1.44	1.33	1.35	1.39
	N	95	180	198	193	182	164
Panel B (1998 – 2003)							
Year		**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Q	Mean	2.098	2.01	2.03	2.15	1.91	2.04
	Std dev	1.147	1.22	1.18	1.19	1.05	0.93
	N	261	253	242	214	308	319
Market capitalization	Mean	2450	2967	2678	3074	3395	3764
($ Millions)	Std dev	5869	7888	4662	4754	17133	15972
	N	261	253	242	214	308	319
BETA	Mean	1.377	1.250	1.294	1.01	1.55	1.74
	Std dev	0.675	0.479	0.685	0.873	1.01	0.84
	N	261	253	242	214	308	319
RESIDVAR	Mean	0.024	0.028	0.031	0.037	0.035	0.031
	Std dev	0.009	0.009	0.010	0.013	0.014	0.013
	N	261	253	242	214	308	319
MH%	Mean	6.77	6.68	6.08	4.89	4.99	4.31
	Std dev	9.91	9.51	8.99	7.84	8.46	6.62
	N	261	253	242	214	308	319
TRA%	Mean	17.14	20.94	18.86	36.41	33.82	23.80
	Std dev	8.89	9.84	10.35	13.68	12.41	9.13
	N	261	253	242	214	308	319
QIX%	Mean	40.20	31.11	31.93	22.74	26.18	38.43
	Std dev	13.04	10.55	10.95	6.01	7.56	9.85
	N	261	253	242	214	308	319

Table 1 (cont'd)

Year		1998	1999	2000	2001	2002	2003
DED%	Mean	1.08	8.98	9.41	10.70	11.61	10.44
	Std dev	3.32	8.10	8.08	7.91	8.11	7.39
	N	261	253	242	214	308	319
Total assets	Mean	1733	2284	2172	2548	2236	2588
($ Millions)	Std dev	3433	5188	4972	3743	5627	6022
	N	261	253	242	214	308	319
LEVERAGE	Mean	0.249	0.567	0.240	0.241	0.201	0.197
	Std dev	0.206	0.192	0.178	0.180	0.181	0.167
	N	258	252	241	212	307	318
B/M	Mean	0.465	0.519	0.517	0.472	0.535	0.450
	Std dev	0.269	0.304	0.299	0.278	0.292	0.226
	N	254	247	238	212	305	318
R&D	Mean	0.051	0.031	0.034	0.040	0.044	0.039
	Std dev	0.093	0.052	0.057	0.067	0.063	0.053
	N	244	239	229	204	303	314
ADV	Mean	0.090	0.009	0.010	0.008	0.008	0.009
	Std dev	0.023	0.029	0.031	0.020	0.019	0.025
	N	258	251	241	213	306	312
F-DISP	Mean	0.044	0.036	0.036	0.040	0.030	0.026
	Std dev	0.086	0.062	0.053	0.071	0.063	0.040
	N	261	253	242	214	308	319
F-ERROR	Mean	0.099	0.103	0.090	0.106	0.063	0.059
	Std dev	0.226	0.458	0.172	0.282	0.151	0.132
	N	261	253	242	212	307	318
CASHVOL	Mean	0.044	0.042	0.040	0.047	0.058	0.050
	Std dev	0.048	0.043	0.034	0.045	0.055	0.048
	N	238	239	230	211	287	306
E-INDEX	Mean	2.069	2.21	2.29	2.34	2.30	2.41
	Std dev	1.322	1.32	1.29	1.26	1.26	1.28
	N	261	253	242	214	308	319

Table 2
Investment Objective and Investment Style

Table 2 shows the distribution of investment styles according to institutional investor type. DED, QIX and TRA refer to the number of institutions classified as dedicated, quasi-indexer and transient on the Thomson Financial 13(f) database for the years 1992-2003. LGR, LVA, SGR and SVA refer to the investment styles large growth, large value, small growth and small value determined by the methodology of Abarbanell, Bushee and Raedy (2003). The percentages in parentheses show the relative proportion of investors following a given investment style within a given class of institutional shareholders each year.

Table 2

Year	Type	LGR	LVA	SGR	SVA
1992	DED	11 (10.2%)	10 (9.3%)	63 (58.3%)	24 (22.22%)
	QIX	174 (23.80%)	283 (38.71%)	153 (20.93%)	121 (16.55%)
	TRA	29 (17.16%)	29 (17.16%)	104 (61.54%)	36 (21.30%)
1993	DED	11 (9.6%)	12 (10.5%)	66 (57.9%)	25 (21.93%)
	QIX	165 (21.94%)	291 (38.69%)	175 (23.27%)	121 (16.09%)
	TRA	46 (21.30%)	31 (14.35%)	109 (50.46%)	30 (13.89%)
1994	DED	8 (6.2%)	12 (9.2%)	77 (59.2%)	33 (25.39%)
	QIX	183 (23.17%)	305 (38.61%)	179 (22.65%)	123 (15.57%)
	TRA	45 (23.68%)	27 (14.21%)	96 (50.53%)	22 (11.58%)
1995	DED	8 (6.3%)	12 (9.4%)	75 (59.1%)	32 (25.20%)
	QIX	189 (23.95%)	310 (39.29%)	149 (18.89%)	141 (17.87%)
	TRA	57 (22.35%)	39 (15.29%)	117 (45.88%)	42 (16.47%)
1996	DED	10 (7.5%)	8 (6.0%)	76 (57.1%)	39 (29.32%)
	QIX	211 (25.18%)	316 (37.71%)	176 (21.00%)	135 (16.11%)
	TRA	43 (16.41%)	53 (20.23%)	122 (46.56%)	44 (16.79%)
1997	DED	13 (8.3%)	7 (4.5%)	96 (60.9%)	41 (26.28%)
	QIX	240 (27.03%)	319 (35.92%)	165 (18.58%)	164 (18.47%)
	TRA	71 (24.83%)	41 (14.33%)	126 (44.06%)	48 (16.78%)
1998	DED	0 (0.0%)	0 (0.0%)	6 (26.1%)	17 (73.91%)
	QIX	284 (36.59%)	214 (27.58%)	97 (12.50%)	181 (23.33%)
	TRA	89 (16.89%)	102 (19.36%)	159 (30.17%)	177 (33.58%)
1999	DED	1 (1.8%)	2 (3.6%)	16 (29.1%)	36 (65.46%)
	QIX	335 (38.55%)	267 (30.73%)	81 (9.32%)	186 (21.40%)
	TRA	121 (19.45%)	91 (14.63%)	197 (31.67%)	213 (34.24%)
2000	DED	2 (3.1%)	4 (6.3%)	16 (25.0%)	42 (65.63%)
	QIX	344 (38.78%)	275 (31.00%)	104 (11.73%)	164 (18.49%)
	TRA	114 (15.81%)	148 (20.53%)	232 (32.18%)	227 (31.48%)
2001	DED	3 (5.4%)	1 (1.8%)	16 (28.6%)	36 (64.29%)
	QIX	309 (45.71%)	216 (31.95%)	45 (6.66%)	106 (15.68%)
	TRA	188 (18.65%)	218 (21.63%)	276 (27.38%)	326 (32.34%)
2002	DED	6 (9.2%)	3 (4.6%)	25 (38.4%)	31 (47.69%)
	QIX	337 (41.50%)	253 (31.16%)	82 (10.10%)	140 (17.24%)
	TRA	144 (17.14%)	169 (20.12%)	253 (30.12%)	274 (32.62%)
2003	DED	6 (11.1%)	3 (5.6%)	20 (37.0%)	25 (46.30%)
	QIX	369 (39.81%)	303 (32.69%)	75 (8.09%)	180 (19.42%)
	TRA	119 (18.36%)	106 (16.36%)	202 (31.17%)	221 (34.11%)

Table 3
Correlation Coefficients

Table 3 reports the Pearson correlation coefficients of the key variables used in this study. Values in boldface indicate statistical significance at the 5% level or lower. MH%, TRA%, QIX% and DED% refer to the fraction of outstanding shares held by management, transient, quasi-indexer and dedicated institutional shareholders respectively at the end of the fiscal year. ASSETS references total assets measured at the end of the current fiscal year. B/M is the book value of common equity divided by market value of common equity at the end of the current fiscal year. BETA and RESIDVAR are the beta and residual variance estimates from a market model regression with a terminal date one year before the current fiscal year. For inclusion in this estimation procedure, we require that a firm has at least 110 days of returns data on CRSP prior to the terminal date. EXRET3-12is the cumulative excess return relative to the CRSP value weighted index over the previous 12 months. LEVERAGE is the ratio of long term debt plus short term debt to total assets at the end of the fiscal year. RD, ADV, EBITA and CAPEX refer to fiscal year end research and development expense, advertising expense, earnings before interest and taxes and capital expenditures scaled by total assets respectively. Firms which do not report R&D or advertising in Compustat are assigned a value of 0. CASHVOL is the standard deviation of the previous 5 years earnings before interest and taxes. F-DISP is the I/B/E/S reported standard deviation of analyst forecast estimates of the current fiscal year's earnings per share (EPS). F-ERROR is the difference between the I/B/E/S calculated mean estimate of EPS and the realized value of EPS. When there are multiple observations of both of these variables for a given fiscal year, we use the one taken closest to the end of the fiscal year. E-INDEX is the fiscal year end entrenchment index score from Bebchuk, Cohen and Ferrell (2004). For years in which no entrenchment index score was reported, we use the previous year's value. The index ranges from 0 to 6 with one point being added for each governance provision that favors management.

Table 3

Panel A						
Variable	**TRA%**	**DED%**	**QIX%**	**MH%**	**ASSETS**	**B/M**
TRA%	**1.00**					
DED%	**-0.16**	**1.00**				
QIX%	**-0.05**	**-0.18**	**1.00**			
MH%	**-0.19**	**-0.13**	**-0.21**	**1.00**		
ASSETS	0.04	**0.06**	**0.12**	**-0.11**	**1.00**	
B/M	**-0.14**	0.01	0.03	0.02	**0.05**	**1.00**
BETA	**0.16**	-0.03	**-0.11**	**-0.14**	**-0.14**	**-0.10**
EXRET12	**0.14**	0.03	0.00	-0.00	**0.04**	**-0.33**
LEVERAGE	-0.04	-0.01	-0.01	**-0.04**	**0.32**	**0.20**
RESIDVAR	**0.42**	**-0.16**	**-0.24**	**-0.04**	**-0.23**	**-0.05**
R&D	**0.09**	-0.03	**-0.13**	**-0.16**	**-0.30**	**-0.18**
ADV	**-0.05**	**0.04**	-0.01	0.02	-0.02	**-0.06**
EBITA	-0.03	**0.06**	**0.13**	**0.09**	0.00	**-0.36**
CASHVOL	**0.19**	**-0.07**	**-0.16**	**-0.07**	**-0.26**	**-0.08**
CAPEX	**-0.08**	-0.04	**-0.04**	**0.09**	**-0.09**	0.03
F-DISP	**-0.12**	**0.06**	-0.03	**-0.05**	0.00	**0.22**
F-ERROR	**-0.04**	-0.02	**-0.06**	**-0.05**	**-0.07**	**0.14**
E-INDEX	-0.00	0.00	**0.15**	**-0.22**	**0.09**	**0.17**

Table 3 (cont'd)

Panel B						
Variable	**BETA**	**EXRET12**	**LEVERAGE**	**RESIDVAR**	**R&D**	**ADV**
BETA	**1.00**					
EXRET12	-0.03	**1.00**				
LEVERAGE	**-0.16**	-0.03	**1.00**			
RESIDVAR	**0.63**	0.01	**-0.09**	**1.00**		
R&D	**0.46**	**-0.06**	**-0.27**	**0.43**	**1.00**	
ADV	-0.03	**-0.04**	**-0.05**	-0.04	0.01	**1.00**
EBITA	**-0.28**	**0.13**	**-0.17**	**-0.37**	**-0.33**	0.04
CASHVOL	**0.41**	**-0.07**	-0.03	**0.49**	**0.47**	**0.07**
CAPEX	**-0.06**	**-0.04**	**0.05**	**-0.09**	**-0.09**	0.02
F-DISP	**-0.04**	**-0.11**	**0.16**	-0.02	0.04	0.04
F-ERROR	0.01	**-0.10**	**0.09**	**0.06**	**0.09**	0.00
E-INDEX	**-0.18**	-0.02	**0.12**	**-0.16**	**-0.13**	0.03

Panel C						
Variable	**EBITA**	**CASHVOL**	**CAPEX**	**F-DISP**	**F-ERROR**	**E-INDEX**
EBITA	**1.00**					
CASHVOL	**-0.42**	**1.00**				
CAPEX	**0.04**	0.02	**1.00**			
F-DISP	**-0.29**	**0.19**	**0.06**	**1.00**		
F-ERROR	**-0.25**	**0.18**	0.00	**0.47**	**1.00**	
E-INDEX	-0.02	**-0.13**	**-0.08**	0.03	0.03	**1.00**

Table 4
Aggregate Institutional Investor Preferences

Table 4 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the fraction of shares outstanding held by institutional investors (IH%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects coefficients. The F-M estimates are the time series average coefficients for 12 cross sectional regressions for each year from 1992-2003. Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. For both methods, we proceed stepwise, adding variables that proxy for the following three groups of considerations: the relationship between risk and returns, the quality of information surrounding the firm's operations and the ease with which the firm can be monitored by outside investors. Firm size is measured as the log of total assets at the end of the current fiscal year. Log(B/M) is the log of the book value of common equity divided by market value of common equity at the end of the current fiscal year. BETA and RESIDVAR are the beta and residual variance estimates from a market model regression with a terminal date one year before the current fiscal year. For inclusion in this estimation procedure, we require that a firm has at least 110 days of returns data on CRSP prior to the terminal date. EXRET3-12 is a security's cumulative excess return relative to the CRSP equal weighted index over the 9 months beginning 12 months prior to the measurement of the ownership variable and ending at the beginning of the current (ownership measurement) quarter. LEVERAGE is the ratio of long term debt plus short term debt to total assets. RD, ADV, EBITA and CAPEX refer to research and development expense, advertising expense, earnings before interest and taxes and capital expenditures scaled by total assets respectively. E-INDEX is the entrenchment index score taken from Bebchuk, Cohen and Ferrell (2004). The index ranges from 0 to 6 with one point being added for each governance provision that favors management. With the exception of BETA and RESIDVAR (which are lagged by one fiscal year), all control variables are measured as of the end of the current fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 4

Dependent Variable	**IH%**	**IH%**	**IH%**	**IH%**	**IH%**	**IH%**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
Risk-Return						
Log(Assets)	0.015***	0.023***	0.018***	0.027***	0.018**	0.028***
	(4.84)	(0.003)	(3.96)	(0.003)	(3.66)	(0.004)
Log(BM)	-0.007	-0.012**	0.021	0.003	0.0182	-0.003
	(-1.18)	(0.006)	(1.40)	(0.007)	(1.11)	(0.007)
BETA	0.017*	0.016***	0.027*	-0.007	0.029**	-0.006
	(1.48)	(0.004)	(1.93)	(0.006)	(2.10)	(0.006)
EXRET3-12	0.059***	0.037***	0.069***	0.042***	0.069***	0.041***
	(4.94)	(0.008)	(4.12)	(0.009)	(3.94)	(0.008)
Information Asymmetry						
R&D			0.232***	-0.014	0.215***	0.012
			(3.60)	(0.07)	(3.55)	(0.074)
ADV			0.048	-0.019	0.048	-0.070
			(0.35)	(0.126)	(0.21)	(0.126)
EBITA			0.355***	0.202***	0.359**	0.208***
			(3.45)	(0.046)	(3.52)	(0.047)
CAPEX			-0.137	-0.219***	-0.111**	-0.189***
			(-3.04)	(0.006)	(-2.20)	(0.059)
RESIDVAR			-1.748	2.715***	-1.687	2.862 ***
			(-1.62)	(0.412)	(-1.35)	(0.411)
Monitoring						
LEVERAGE					-0.003	-0.049**
					(-0.55)	(0.024)
E-INDEX					0.008**	0.014***
					(3.22)	(0.003)
R^2(%)	8.93	4.07	17.43	6.84	19.18	8.16

Table 5
Corporate Insider Preferences

Table 5 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the fraction of shares outstanding held by management (MH%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. Fama-Macbeth (1973) t-statistics and fixed effects standard errors are reported in parentheses. The independent variable definitions are consistent with Table 4.

Dependent Variable	**MH%**	**MH%**	**MH%**	**MH%**	**MH%**	**MH%**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
Risk-Return						
Log(Assets)	-0.010***	-0.010***	-0.015***	-0.014***	-0.014***	-0.011***
	(-9.21)	(0.002)	(-6.59)	(0.002)	(-4.69)	(0.002)
Log(BM)	0.002	0.003	-0.003	0.002	0.004	0.008*
	(0.23)	(0.003)	(-0.83)	(0.003)	(0.28)	(0.003)
BETA	-0.005*	-0.007***	0.000	0.004	-0.002	0.001
	(-2.24)	(0.002)	(0.21)	(0.003)	(-0.87)	(0.003)
EXRET3-12	0.003	0.002	-0.000	-0.001	0.003	-0.001
	(0.28)	(0.004)	(-0.67)	(0.004)	(-0.27)	(0.004)
Information Asymmetry						
R&D			-0.372***	-0.280***	-0.386***	-0.307***
			(-7.36)	(0.036)	(-7.42)	(0.036)
ADV			0.261	0.1529**	0.298**	0.170***
			(1.68)	(0.063)	(2.01)	(0.036)
EBITA			0.008	0.034	-0.000	0.012
			(0.44)	(0.023)	(0.33)	(0.023)
CAPEX			0.056	0.120***	0.011	0.083***
			(0.96)	(0.029)	(0.16)	(0.029)
Monitoring						
RESIDVAR			1.109**	0.013	0.497**	-0.132
			(2.68)	(0.206)	(2.19)	(0.200)
LEVERAGE					-0.014	-0.022*
					(-1.36)	(0.011)
E-INDEX					-0.016***	-0.016***
					(-11.66)	(0.001)
R^2(%)	3.78	2.54	14.44	10.90	21.02	12.68

Table 6
Equity Demand Functions: Transient Institutional Investors

Table 6 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the fraction of shares outstanding held by transient institutional investors (TRA%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. Fama-Macbeth (1973) t-statistics and fixed effects standard errors are reported in parentheses. The independent variable definitions are consistent with Table 4.

Dependent Variable	**TRA%**	**TRA%**	**TRA%**	**TRA%**	**TRA%**	**TRA%**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
Risk-Return						
Log(Assets)	-0.003	0.007***	0.003	0.019***	0.003	0.018***
	(-0.81)	(0.002)	(0.86)	(0.002)	(0.77)	(0.003)
Log(BM)	-0.014***	-0.019***	-0.003**	-0.010*	-0.005**	-0.013**
	(-3.61)	(0.004)	(-2.67)	(0.005)	(-2.88)	(0.005)
BETA	0.032***	0.028***	0.019**	-0.037***	0.021***	-0.036***
	(7.16)	(0.003)	(3.86)	(0.004)	(4.10)	(0.004)
EXRET3-12	0.063***	0.065***	0.063***	0.027***	0.062***	0.026***
	(7.63)	(0.006)	(8.30)	(0.006)	(8.22)	(0.006)
Information Asymmetry						
R&D			0.083**	-0.060	0.089*	-0.052
			(2.11)	(0.049)	(1.85)	(0.051)
ADV			-0.094	-0.284***	-0.095	-0.310**
			(-0.44)	(0.087)	(-0.54)	(0.087)
EBITA			0.140***	0.135***	0.149***	0.139***
			(4.66)	(0.032)	(4.16)	(0.033)
CAPEX			0.019	-0.078**	0.034	-0.060
			(0.69)	(0.041)	(1.39)	(0.041)
RESIDVAR			1.126**	6.895***	1.233***	6.982***
			(2.47)	(0.285)	(2.77)	(0.285)
Monitoring						
LEVERAGE					0.016	-0.033**
					(0.06)	(0.016)
E-INDEX					0.002**	0.008***
					(2.54)	(0.002)
R^2(%)	25.27	8.31	31.79	22.41	32.82	26.55

Table 7
Equity Demand Functions: Quasi-Indexer Institutional Investors

Table 7 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the fraction of shares outstanding held by quasi-indexer institutional investors (QIX%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. Fama-Macbeth (1973) t-statistics and fixed effects standard errors are reported in parentheses. The independent variable definitions are consistent with Table 4.

Dependent Variable	**QIX%**	**QIX%**	**QIX%**	**QIX%**	**QIX%**	**QIX%**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
Risk-Return						
Log(Assets)	0.012***	0.011***	0.013**	0.005**	0.011***	0.006***
	(3.86)	(0.002)	(3.92)	(0.002)	(4.12)	(0.002)
Log(BM)	-0.001	0.004	0.017**	0.009*	0.016**	0.006
	(0.13)	(0.004)	(4.08)	(0.004)	(3.47)	(0.004)
BETA	-0.022***	-0.013***	-0.002	0.014***	-0.002	0.014***
	(-5.28)	(0.003)	(-0.56)	(0.003)	(-0.60)	(0.004)
EXRET3-12	-0.012*	-0.015***	-0.005	-0.013**	-0.010	-0.013**
	(-1.75)	(0.005)	(-1.07)	(0.006)	(-1.18)	(0.006)
Information Asymmetry						
R&D			0.112**	-0.033	0.058	-0.035
			(2.21)	(0.046)	(1.53)	(0.047)
ADV			-0.016	0.036	-0.050	0.078
			(-0.082)	(0.079)	(-1.51)	(0.079)
EBITA			0.209*	0.067**	0.190**	0.066**
			(3.00)	(0.029)	(2.88)	(0.029)
CAPEX			-0.044**	-0.111***	-0.014	-0.088**
			(-2.40)	(0.037)	(-1.35)	(0.037)
RESIDVAR			-2.371***	-2.275***	-2.022***	-2.123***
			(-3.86)	(0.260)	(-3.61)	(0.259)
Monitoring						
LEVERAGE					-0.055***	-0.032**
					(-3.79)	(0.015)
E-INDEX					0.008***	0.011***
					(4.79)	(0.002)
R^2(%)	8.53	2.56	18.31	4.56	21.23	9.20

Table 8
Equity Demand Functions: Dedicated Institutional Investors

Table 8 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the fraction of shares outstanding held by dedicated institutional investors (DED%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. Fama-Macbeth (1973) t-statistics and fixed effects standard errors are reported in parentheses. The independent variable definitions are consistent with Table 4.

Dependent Variable	**DED%**	**DED%**	**DED%**	**DED%**	**DED%**	**DED%**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
Risk-Return						
Log(Assets)	0.006***	0.005***	0.006***	0.004**	0.004	0.004**
	(3.27)	(0.002)	(2.78)	(0.002)	(0.004)	(0.002)
Log(BM)	0.006	0.002	0.005	0.002	0.005	0.003
	(0.90)	(0.003)	(0.63)	(0.004)	(0.61)	(0.004)
BETA	0.006	-0.003	0.012*	0.011***	0.012	0.014***
	(1.05)	(0.002)	(1.65)	(0.003)	(1.67)	(0.003)
EXRET3-12	0.005	-0.014	0.009	0.002	0.011	0.007
	(0.50)	(0.005)	(0.81)	(0.005)	(0.76)	(0.005)
Information Asymmetry						
R&D			0.075	0.109***	0.083**	0.117***
			(2.88)	(0.041)	(2.65)	(0.042)
ADV			0.175*	0.094	0.203*	0.100
			(2.10)	(0.07)	(2.10)	(0.072)
EBITA			-0.003	0.034	0.009	0.034
			(-0.21)	(0.026)	(0.13)	(0.027)
CAPEX			-0.048	-0.031	-0.066*	-0.053
			(-1.76)	(0.033)	(-1.99)	(0.003)
RESIDVAR			-0.713*	-1.663***	-0.866*	-1.714***
			(-1.79)	(0.234)	(-1.89)	(0.234)
Monitoring						
LEVERAGE					0.030	-0.000
					(1.67)	(0.001)
E-INDEX					-0.003*	-0.002
					(-1.76)	(0.002)
R^2(%)	5.99	1.00	12.31	3.83	14.73	3.97

Table 9
Changes in Institutional Ownership and Firm Transparency

R^2 are obtained from annual market model regressions augmented with an industry factor. Daily individual stock returns are regressed against the CRSP value weighted index and the return on a stock's 2-digit SIC industry, excluding the stock itself. As R^2 is bounded between 0 and 1, we apply the logistic transformation of Morck, Yeung and Yu (2000). For each year, the transformed R^2 statistic is regressed on the prior year's change in institutional ownership, the market value equity, the number of analysts providing annual EPS estimates in I/B/E/S, Amihud's 2002 illiquidity measure and the number of years since initial listing in CRSP in a pooled time-series cross-section setup. ΔTRA%, ΔQIX%, ΔDED% refer to changes in holdings by transient, quasi-indexer and dedicated institutional investors respectively. ILLIQ is multiplied by 1,000,000 as per Hasbrouck's (2005) formulation.

Dependent Variable	**Logistic R^2**	**Logistic R^2**	**Logistic R^2**	**Logistic R^2**
Lag ΔTRA%	0.137			0.382***
	(0.131)			(0.141)
Lag ΔQIX%		-0.652***		0.151
		(0.142)		(0.169)
Lag ΔDED%			1.587***	1.728***
			(0.156)	(0.183)
SIZE	0.649***	0.657***	0.651***	0.644***
	(0.017)	(0.016)	(0.017)	(0.017)
NUMEST	-0.004	-0.006	-0.005	-0.003
	(0.003)	(0.004)	(0.003)	(0.003)
ILLIQ	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
AGE	0.002**	0.002*	0.003**	0.003**
	(0.001)	(0.001)	(0.001)	(0.001)
R^2(%)	31.72	31.95	32.87	32.96

Table 10
Aggregate Changes in Institutional Ownership

Table 10 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the annual change in the fraction of shares outstanding held by institutional investors in the aggregate (ΔIH%). To investigate the dynamics of trade, changes in institutional ownership are related to their own one year lag and the one year lag of changes in insider ownership (Lag ΔMH%). F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. The F-M estimates are the time series average coefficients for 10 cross sectional regressions for each year from 1994-2003 (with the years 1992 and 1993 being dropped because of the lag structure of the specification). Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. All control variables are measured as of the end of the previous fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 10

Dependent Variable	**ΔIH%**	**ΔIH%**
Regression Type	**F-M**	**FE**
Lag ΔIH%	-0.187**	-0.202***
	(-3.24)	(0.022)
Lag ΔMH%	-0.245*	-0.052
	(-1.79)	(0.077)
Log(Assets)	-0.009**	-0.003
	(-3.82)	(0.003)
Log(BM)	0.010	-0.001
	(1.21)	(0.007)
BETA	-0.008	-0.030***
	(-1.68)	(0.004)
EXRET3-12	0.084***	0.065***
	(8.54)	(0.006)
R&D	0.076	0.059
	(1.37)	(0.048)
ADV	0.097**	0.087
	(2.59)	(0.085)
EBITA	0.045	0.024
	(0.17)	(0.030)
CAPEX	-0.016	-0.011**
	(-1.23)	(0.037)
RESIDVAR	0.069	1.592***
	(0.12)	(0.280)
LEVERAGE	0.011	-0.011
	(0.42)	(0.016)
E-INDEX	-0.003	-0.002
	(-1.56)	(0.02)
R^2(%)	36.35	18.57

Table 11
Changes in Insider Ownership

Table 11 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the annual change in the fraction of shares outstanding held by corporate insiders (ΔMH%). To investigate the dynamics of trade, changes in insider ownership are related to their own one year lag and the one year lag of changes in holdings by institutional investors. ΔIH%, ΔTRA%, ΔQIX%, ΔDED% refer to changes in holdings by institutions in the aggregate, transient institutional investors, quasi-indexer institutional investors and dedicated institutional investors respectively. F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. The F-M estimates are the time series average coefficients for 10 cross sectional regressions for each year from 1994-2003 (with the years 1992 and 1993 being dropped because of the lag structure of the specification). Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. All control variables are measured as of the end of the previous fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 11

Dependent Variable	ΔMH%	ΔMH%	ΔMH%	ΔMH%
Regression Type	F-M	FE	F-M	FE
Lag ΔIH%	-0.011	-0.012		
	(-1.48)	(0.007)		
Lag ΔMH%	0.046	-0.016	0.047	-0.021
	(-0.15)	(0.029)	(-0.01)	(0.029)
Lag ΔTRA%			0.004	-0.004
			(1.04)	(0.008)
Lag ΔQIX%			-0.030**	-0.027***
			(-3.12)	(0.009)
Lag ΔDED%			-0.016	-0.023**
			(-1.57)	(0.010)
Log(Assets)	0.002*	0.001	0.0019*	0.001
	(1.94)	(0.001)	(1.59)	(0.000)
Log(BM)	0.001	0.001	0.0017	0.002
	(0.61)	(0.001)	(0.80)	(0.001)
BETA	-0.003	-0.001	-0.003	-0.000
	(-0.69)	(0.001)	(-0.73)	(0.001)
EXRET3-12	-0.004*	-0.005***	-0.004	-0.006***
	(-1.83)	(0.002)	(-1.59)	(0.002)
R&D	0.003	0.027	-0.001	0.018
	(0.75)	(0.016)	(0.56)	(0.016)
ADV	-0.018	0.002	-0.018	0.013
	(-0.35)	(0.028)	(-0.39)	(0.027)
EBITA	-0.013	-0.018	-0.008	-0.017
	(-0.60)	(0.010)	(-0.37)	(0.010)
CAPEX	-0.013	-0.010	-0.014	-0.006
	(-1.31)	(0.012)	(-1.22)	(0.012)
RESIDVAR	0.006	-0.096	-0.076	-0.084
	(-0.84)	(0.094)	(-0.69)	(0.094)
LEVERAGE	0.000	0.005	-0.000	0.004
	(0.35)	(0.005)	(0.48)	(0.005)
E-INDEX	0.000	0.000	0.000	0.000
	(0.98)	(0.000)	(0.86)	(0.000)
R^2(%)	12.46	7.24	14.53	11.19

Table 12
Portfolio Rebalancing: Transient Institutional Investors

Table 12 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the annual change in the fraction of shares outstanding held by transient institutional investors (ΔTRA%). To investigate the dynamics of trade, changes in transient ownership are related to their own one year lag and the one year lag of changes in holdings by all other classes of investors. For expository purposes, we report results for both the parsimonious (own lags only) and full (all institutional classes lagged) regression specifications. ΔMH%, ΔQIX%, ΔDED% refer to changes in holdings by corporate insiders, quasi-indexer institutional investors and dedicated institutional investors respectively. F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. The F-M estimates are the time series average coefficients for 10 cross sectional regressions for each year from 1994-2003 (with the years 1992 and 1993 being dropped because of the lag structure of the specification). Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. All control variables are measured as of the end of the previous fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 12

Dependent Variable	TRA%	TRA%	TRA%	TRA%
Regression Type	F-M	FE	F-M	FE
Lag ΔMH%	-0.033	-0.020	-0.065	-0.031
	(-0.30)	(-0.008)	(-0.32)	(0.080)
Lag ΔTRA%	-0.289***	-0.258***	-0.266***	-0.276***
	(-9.58)	(0.022)	(-9.69)	(0.025)
Lag ΔQIX%			0.047	-0.025
			(1.82)	(0.031)
Lag ΔDED%			0.015	-0.089***
			(0.58)	(0.032)
Log(Assets)	-0.007	-0.0025	-0.007	-0.000
	(-1.58)	(0.003)	(-1.51)	(0.002)
Log(BM)	0.011*	-0.004	0.012	-0.000
	(1.93)	(0.004)	(2.19)	(0.004)
BETA	-0.007	-0.052***	-0.008	-0.051***
	(-1.51)	(0.004)	(-1.53)	(0.004)
FXRET3-12	0.096***	0.090***	0.092***	0.089***
	(8.63)	(0.006)	(8.32)	(0.006)
R&D	0.098	0.085*	0.095	0.088*
	(1.67)	(0.049)	(1.56)	(0.049)
ADV	0.071	0.012	0.066	0.002
	(0.47)	(-0.016)	(0.17)	(0.088)
EBITA	-0.088***	-0.004	-0.070***	-0.022
	(-4.26)	(0.032)	(-4.18)	(0.032)
CAPEX	0.009	0.033	-0.002	0.026
	(-0.59)	(0.037)	(-0.82)	(0.038)
RESIDVAR	-0.422	2.234***	-0.319	2.219
	(-1.40)	(0.291)	(-1.24)	(0.290)
LEVERAGE	0.005	0.025	0.002	0.023
	(-0.04)	(0.017)	(-0.27)	(0.017)
E-INDEX	-0.000	-0.003*	0.000	-0.003*
	(-0.83)	(0.002)	(-0.71)	(0.002)
R^2(%)	41.84	24.89	43.20	25.57

Table 13
Portfolio Rebalancing: Quasi-Indexer Institutional Investors

Table 13 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the annual change in the fraction of shares outstanding held by quasi-indexer institutional investors (ΔQIX%). To investigate the dynamics of trade, changes in quasi-indexer ownership are related to their own one year lag and the one year lag of changes in holdings by all other classes of investors. For expository purposes, we report results for both the parsimonious (own lags only) and full (all institutional classes lagged) regression specifications. ΔMH%, ΔTRA %, ΔDED% refer to changes in holdings by corporate insiders, transient institutional investors and dedicated institutional investors respectively. F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. The F-M estimates are the time series average coefficients for 10 cross sectional regressions for each year from 1994-2003 (with the years 1992 and 1993 being dropped because of the lag structure of the specification). Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. All control variables are measured as of the end of the previous fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 13

Dependent Variable	QIX%	QIX%	QIX%	QIX%
Regression Type	F-M	FE	F-M	FE
Lag ΔMH%	-0.288**	-0.134*	-0.251**	-0.109
	(-2.56)	(0.087)	(-2.27)	(0.08)
Lag ΔTRA%			0.0172	0.032
			(0.92)	(0.026)
Lag ΔQIX%	-0.244***	-0.262***	-0.219***	-0.135***
	(-4.86)	(0.025)	(-4.09)	(0.033)
Lag ΔDED%			0.030	0.226***
			(0.47)	(0.035)
Log(Assets)	-0.002	-0.007**	-0.002	-0.007**
	(-0.60)	(0.003)	(-0.70)	(0.003)
Log(BM)	0.000	0.000	-0.002	-0.000
	(0.05)	(0.005)	(-0.17)	(0.005)
BETA	0.001	0.034***	-0.001	0.033***
	(0.07)	(0.005)	(-0.63)	(0.005)
EXRET3-12	0.0027	-0.012*	0.004	-0.009
	(0.84)	(0.006)	(0.56)	(0.006)
R&D	-0.029	-0.019	-0.037	-0.022*
	(-0.09)	(0.054)	(-0.39)	(0.053)
ADV	-0.018	-0.049	0.014	-0.085
	(0.32)	(0.096)	(0.89)	(0.094)
EBITA	0.042**	-0.050	0.041**	-0.068
	(2.68)	(0.034)	(2.84)	(0.034)
CAPEX	-0.014	-0.042	-0.014	-0.039
	(-1.30)	(0.042)	(-1.17)	(0.041)
RESIDVAR	0.029	-2.433***	0.136	-1.984***
	(0.52)	(0.317)	(0.85)	(0.313)
LEVERAGE	0.013	-0.011	0.016	-0.008
	(1.03)	(0.018)	(1.17)	(0.018)
E-INDEX	-0.002	-0.000	-0.003	-0.000
	(-1.03)	(0.002)	(-1.00)	(0.002)
R^2(%)	20.29	10.98	23.11	12.63

Table 14
Portfolio Rebalancing: Dedicated Institutional Investors

Table 14 presents the results of a sequence of Fama-Macbeth (1973) and firm level fixed effects regressions in which the dependent variable is the annual change in the fraction of shares outstanding held by dedicated institutional investors (ΔDED%). To investigate the dynamics of trade, changes in dedicated ownership are related to their own one year lag and the one year lag of changes in holdings by all other classes of investors. For expository purposes, we report results for both the parsimonious (own lags only) and full (all institutional classes lagged) regression specifications. ΔMH%, ΔTRA %, ΔQIX % refer to changes in holdings by corporate insiders, transient institutional investors and quasi-indexer institutional investors respectively. F-M denotes Fama-Macbeth (1973) and FE denotes fixed effects type regressions. The F-M estimates are the time series average coefficients for 10 cross sectional regressions for each year from 1994-2003 (with the years 1992 and 1993 being dropped because of the lag structure of the specification). Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects regressions include intercept terms and year dummies but these are not reported. Fixed effects standard errors are reported in parentheses. All control variables are measured as of the end of the previous fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively.

Table 14

Dependent Variable	DED%	DED%	DED%	DED%
Regression Type	F-M	FE	F-M	FE
Lag ΔMH%	-0.010	0.095	0.001	0.102
	(-0.34)	(0.076)	(-0.23)	(0.077)
Lag ΔTRA%			0.015	0.041
			(0.19)	(0.024)
Lag ΔQIX%			0.042	-0.017
			(1.07)	(0.030)
Lag ΔDED%	-0.233***	-0.327***	-0.204***	-0.333***
	(-5.06)	(0.023)	(-3.83)	(0.031)
Log(Assets)	0.002	0.008***	0.002	0.008***
	(0.47)	(0.003)	(0.40)	(0.003)
Log(BM)	-0.004	0.000	-0.002	0.002
	(-1.47)	(0.004)	(-1.22)	(0.004)
BETA	-0.001	-0.014***	-0.001	-0.013**
	(-0.13)	(0.004)	(-0.24)	(0.004)
EXRET3-12	0.002	0.009	0.000	0.000
	(0.29)	(0.005)	(0.45)	(0.006)
R&D	0.024	-0.031	0.025	-0.029
	(0.77)	(0.048)	(0.77)	(0.047)
ADV	0.032	0.128	0.020	0.131
	(0.73)	(0.080)	(0.63)	(0.085)
EBITA	0.081*	0.117***	0.085*	0.088***
	(2.14)	(0.030)	(2.10)	(0.031)
CAPEX	0.009	-0.043	-0.011	-0.018
	(0.29)	(0.036)	(0.22)	(0.036)
RESIDVAR	-0.081	1.618***	-0.060	1.590***
	(-0.09)	(0.279)	(-0.27)	(0.279)
LEVERAGE	-0.024	-0.037**	-0.019	-0.037**
	(-1.66)	(0.016)	(-1.42)	(0.016)
E-INDEX	0.000	0.003	-0.000	0.002
	(0.29)	(0.002)	(0.11)	(0.001)
R^2(%)	21.20	13.02	23.65	13.19

Table 15
Performance Attribution: Institutional Investors and Corporate Insiders

Table 15 shows the time series average coefficients for 132 cross-sectional regressions for each month from December 1993-December 2003. The dependent variable is individual monthly excess stock returns relative to the CRSP equal weighted index (Rit). IH% and MH% refer to the fraction of shares owned by institutions and corporate insiders respectively at the end of the current quarter. Lagged versions of all institutional ownership measures refer to holdings at the end of the previous quarter. Fama-Macbeth (1973) t-statistics are reported in parentheses. SIZE is the market capitalization as of the previous fiscal year. B/M is the book to market ratio as of the previous fiscal year. NASDUM is an indicator equal to one if the firm traded on the NASDAQ at the beginning of month t. PRICE is the reciprocal of price as of month t-2. NYDVOL and NASDVOL are the dollar volume of trade in month t-2 for stocks that trade on the NYSE or AMEX and NASDAQ respectively. YLD is the ratio of dividends to market capitalization as of the previous fiscal year. RET2-3, RET4-6 and RET7-12 are the compounded gross returns over the months t-3 to t-2, t-6 to t-4 and t-12 to t-7 respectively. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels respectively.

Table 15

Dependent Variable	Rit	Rit	Rit	Rit
IH%	0.032***			
	(3.06)			
Lag IH%		-0.005		
		(-0.51)		
MH%			2.288	
			(1.09)	
Lag MH%				-0.996
				(-0.99)
$MH\%^2$			-20.681	
			(-1.08)	
Lag $MH\%^2$				9.456
				(1.01)
SIZE	0.000*	0.000	0.000	0.001
	(1.77)	(0.94)	(0.88)	(0.64)
B/M	0.018***	0.019***	0.021**	0.021*
	(2.81)	(2.98)	(2.31)	(1.98)
NASDUM	0.031	-0 024	-0.000	-0.003
	(0.55)	(-0.49)	(-0.000)	(-0.041)
PRICE	0.004	-0.000	-0.001	-0.001
	(1.15)	(-0.12)	(-0.01)	(-0.01)
NYDVOL	-0.002	-0.002	-0.000	-0.000
	(-1.18)	(-1.06)	(-1.12)	(-0.47)
NASDVOL	-0.004	0.000	-0.007	0.00
	(-0.95)	(0.00)	(-1.00)	(0.00)
YLD	-0.229*	-0.261**	-0.214**	-0.214**
	(-1.88)	(-2.02)	(-2.09)	(-2.38)
RET2-3	0.005	-0.002	0.001	-0.001
	(0.44)	(-0.13)	(0.00)	(0.01)
RET4-6	-0.002	0.001	-0.000	0.001
	(-0.83)	(0.56)	(-0.00)	(0.07)
RET7-12	-0.014	0.034*	-0.000	0.054
	(-0.45)	(1.77)	(-0.00)	(0.21)
$R^2(\%)$	21.70	22.17	8.38	8.99

Table 16
Performance Attribution: Institutional Investors by Class

Table 16 shows the time series average coefficients for 132 cross-sectional regressions for each month from December 1993-December 2003. The dependent variable is individual monthly excess stock returns relative to the CRSP equal weighted index (Rit). TRA%, QIX% and DED% refer to the fraction of shares owned by transient, quasi-indexer and dedicated institutions respectively at the end of the current quarter. Lagged versions of all institutional ownership measures refer to holdings at the end of the previous quarter. Fama-Macbeth (1973) t-statistics are reported in parentheses. SIZE is the market capitalization as of the previous fiscal year. B/M is the book to market ratio as of the previous fiscal year. NASDUM is an indicator equal to one if the firm traded on the NASDAQ at the beginning of month t. PRICE is the reciprocal of price as of month t-2. NYDVOL and NASDVOL are the dollar volume of trade in month t-2 for stocks that trade on the NYSE or AMEX and NASDAQ respectively. YLD is the ratio of dividends to market capitalization as of the previous fiscal year. RET2-3, RET4-6 and RET7-12 are the compounded gross returns over the months t-3 to t-2, t-6 to t-4 and t-12 to t-7 respectively. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels respectively.

Table 16

Dependent Variable	Rit	Rit	Rit	Rit	Rit	Rit
TRA%	0.132***					
	(7.42)					
Lag TRA		0.004				
		(0.23)				
QIX%			-0.011			
			(-0.78)			
Lag QIX%				-0.001		
				(-0.07)		
DED%					0.036*	
					(1.69)	
Lag DED%						0.009
						(0.40)
SIZE	0.000***	0.000	0.000	0.000	0.000	0.000
	(3.55)	(1.34)	(0.52)	(0.96)	(0.58)	(0.77)
B/M	0.017**	0.018**	0.018**	0.019***	0.019***	0.017***
	(2.72)	(2.92)	(2.69)	(2.81)	(3.03)	(2.72)
NASDUM	0.041	-0.027	0.043	-0.030	0.037	-0.027
	(0.71)	(-0.61)	(0.76)	(-0.62)	(0.67)	(-0.56)
PRICE	0.004	-0.001	0.001	-0.001	0.002	-0.003
	(1.16)	(-0.27)	(0.42)	(-0.17)	(0.49)	(-0.45)
NYDVOL	-0.005**	-0.003	-0.001	-0.002	-0.001	-0.003
	(-2.54)	(-1.28)	(-0.72)	(-1.26)	(-0.48)	(-1.21)
NASDVOL	-0.008	-0.00	-0.005	0.000	-0.004	-0.001
	(-1.55)	(-0.13)	(-0.97)	(0.02)	(-0.80)	(-0.14)
YLD	-0.032	-0.222*	-0.242*	-0.270**	-0.179	-0.269**
	(-0.28)	(-1.93)	(-1.95)	(-2.26)	(-1.57)	(-2.36)
RET2-3	-0.010	-0.009	0.004	-0.004	0.006	-0.009
	(-0.86)	(-0.66)	(0.33)	(-0.31)	(0.47)	(-0.54)
RET4-6	-0.002	0.002	-0.002	0.002	-0.003	0.003
	(-1.15)	(0.85)	(-0.80)	(0.71)	(-1.02)	(0.83)
RET7-12	-0.025	0.041*	-0.006	0.047	-0.021	0.058
	(-1.04)	(1.89)	(-0.28)	(1.56)	(-0.61)	(1.49)
R^2(%)	22.59	22.54	21.20	21.97	21.47	21.91

Table 17
Performance Attribution: Transient Institutional Investment Strategies: Growth vs. Value

Table 17 shows the time series average coefficients for 132 cross-sectional regressions for each month from December 1993-December 2003. The dependent variable is individual monthly excess stock returns relative to the CRSP equal weighted index. TRA-LVA%, TRA-LGR%, TRA-SVA% and TRA-SGR% refer to the holdings of transient institutions that invest in large value, large growth, small value and small growth firms at the end of the current quarter, respectively. The categorization of transient institutions is determined by the method of Abarbanell, Bushee and Raedy (2003). Lagged versions of all institutional ownership measures refer to holdings at the end of the previous quarter. Fama-Macbeth (1973) t-statistics are reported in parentheses. SIZE is the market capitalization as of the previous fiscal year. B/M is the book to market ratio as of the previous fiscal year. NASDUM is an indicator equal to one if the firm traded on the NASDAQ at the beginning of month t. PRICE is the reciprocal of price as of month t-2. NYDVOL and NASDVOL are the dollar volume of trade in month t-2 for stocks that trade on the NYSE or AMEX and NASDAQ respectively. YLD is the ratio of dividends to market capitalization as of the previous fiscal year. RET2-3, RET4-6 and RET7-12 are the compounded gross returns over the months t-3 to t-2, t-6 to t-4 and t-12 to t-7 respectively. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels respectively.

Table 17

Panel A				
Dependent Variable	**Rit**	**Rit**	**Rit**	**Rit**
TRA-LGR%	0.198***			
	(2.89)			
Lag TRA-LGR%		0.044		
		(0.70)		
TRA-SGR%			0.218***	
			(9.31)	
Lag TRA-SGR%				0.008
				(0.30)
SIZE	0.000	0.000	0.000	0.000
	(0.77)	(1.31)	(4.37)	(1.60)
B/M	0.018***	0.016***	0.022***	0.019***
	(2.88)	(2.59)	(3.32)	(2.95)
NASDUM	0.037	-0.029	0.067	-0.025
	(0.70)	(-0.63)	(1.03)	(-0.53)
PRICE	0.003	-0.002	0.003	-0.000
	(0.90)	(-0.41)	(1.09)	(-0.03)
NYDVOL	-0.002	-0.004	-0.004**	-0.002
	(-1.09)	(-1.27)	(-2.47)	(-1.39)
NASDVOL	-0.005	-0.001	-0.009*	-0.001
	(-1.06)	(-0.30)	(-1.71)	(-0.15)
YLD	-0.168	-0.264**	0.126	-0.219*
	(-1.47)	(-2.43)	(1.14)	(-1.77)
RET2-3	0.005	-0.011	-0.016	-0.008
	(0.44)	(-0.58)	(-1.42)	(-0.66)
RET4-6	-0.002	0.006	-0.003	0.001
	(-0.79)	(0.95)	(-1.66)	(0.53)
RET7-12	-0.008	0.074	-0.038	0.028
	(-0.30)	(1.46)	(-1.48)	(1.56)
R^2(%)	21.38	22.05	22.77	22.66

Table 17 (cont'd).

Panel B				
Dependent Variable	**Rit**	**Rit**	**Rit**	**Rit**
TRA-LVA%	0.100*			
	(1.88)			
Lag TRA-LVA%		0.065		
		(0.99)		
TRA-SVA%			-0.062	
			(-0.99)	
Lag TRA-SVA%				-0.033
				(-0.50)
SIZE	0.000	0.000	0.000	0.000
	(1.16)	(1.02)	(0.22)	(0.56)
B/M	0.019***	0.016***	0.022***	0.020***
	(3.08)	(2.49)	(3.28)	(2.96)
NASDUM	0.042	-0.026	0.041	-0.032
	(0.75)	(-0.53)	(0.69)	(-0.63)
PRICE	0.003	-0.001	0.003	0.001
	(0.80)	(-0.25)	(0.75)	(0.18)
NYDVOL	-0.002	-0.003	-0.001	-0.002
	(-1.07)	(-1.14)	(-0.72)	(-1.19)
NASDVOL	-0.005	-0.000	-0.004	0.000
	(-1.09)	(-0.14)	(-0.93)	(0.06)
YLD	-0.234**	-0.266**	-0.245**	-0.263**
	(-2.19)	(-2.36)	(-2.23)	(-2.42)
RET2-3	0.007	-0.005	0.002	-0.006
	(0.58)	(-0.32)	(0.17)	(-0.47)
RET4-6	-0.001	0.005	-0.000	0.003
	(-0.50)	(1.07)	(-0.35)	(0.92)
RET7-12	0.001	0.069*	-0.002	0.046*
	(0.06)	(1.76)	(-0.06)	(1.81)
R^2(%)	21.19	22.23	21.25	22.00

Table 18
Ownership Structure and Firm Value

Table 18 presents the results of a sequence regressions in which the dependent variable is Tobin's Q (measured as the market value of equity (Compustat item 199 x Compustat item 25) plus the book value of assets (Compustat item 6) minus the book value of common equity including deferred taxes (Compustat items 60 and 74) all divided by the book value of assets). F-M and FE denote Fama-Macbeth (1973) and fixed effects regression types respectively. The F-M estimates are the time series average coefficients for 12 cross sectional regressions for each year from 1992-2003. Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects specifications report standard errors in parentheses.

Dependent Variable	**Q**	**Q**	**Q**	**Q**	**Q**	**Q**
Regression Type	**F-M**	**FE**	**F-M**	**FE**	**F-M**	**FE**
MH%	1.451**	0.649	1.732***	1.209**	1.023**	0.900*
	(2.84)	(0.555)	(3.15)	(0.557)	(2.29)	(0.477)
$MH\%^2$	-4.388**	-1.214	-3.877*	-1.642	-3.502*	-1.977
	(-2.50)	(1.400)	(-2.07)	(1.414)	(-2.02)	(1.17)
IH%	0.535**	0.496***				
	(4.57)	(0.126)				
TRA%			2.243***	1.059***	2.073**	1.021***
			(5.27)	(0.161)	(4.88)	(0.140)
QIX%			-0.512*	-0.214	-0.325	0.090
			(-2.05)	(0.200)	(-1.41)	(0.171)
DED%			0.033	0.011	-0.101	0.069
			(0.07)	(0.225)	(-0.23)	(0.193)
RD	2.049**	2.532***	2.034**	2.697***	1.502**	2.695***
	(2.76)	(0.352)	(3.47)	(0.357)	(2.19)	(0.310)
ADV	2.451**	1.942***	2.087**	1.854**	2.631**	1.983***
	(2.43)	(0.717)	(2.15)	(0.724)	(2.70)	(0.594)
LEVERAGE	-1.682***	-1.698***	-1.735***	-1.817***	-1.638**	-1.472***
	(-6.88)	(0.121)	(-6.74)	(0.122)	(-6.79)	(0.103)
Log(Assets)	-0.0164	-0.003	-0.017	-0.000	-0.023	0.026
	(-0.55)	(0.020)	(-0.64)	(0.02)	(-0.86)	(0.017)
E-INDEX	-0.151***	-0.149***			-0.138***	-0.129***
	(-8.81)	(0.016)			(-9.63)	(0.014)
R^2(%)	25.26	19.54	27.09	17.66	29.84	19.63

Table 19
Robustness Tests

Table 19 presents the results of a sequence regressions in which the dependent variable is Tobin's Q (measured as the market value of equity (Compustat item 199 x Compustat item 25) plus the book value of assets (Compustat item 6) minus the book value of common equity including deferred taxes (Compustat items 60 and 74) all divided by the book value of assets). F-M, FE and IV denote Fama-Macbeth (1973), fixed effects and instrumental variables regression types respectively. The F-M estimates are the time series average coefficients for 12 cross sectional regressions for each year from 1992-2003. Fama-Macbeth (1973) t-statistics are reported in parentheses. The fixed effects and instrumental variables specifications report standard errors in parentheses. The fixed effects and instrumental variables specifications report standard errors in parentheses. As instruments for our endogenous ownership measures we use the log of total assets, its square, beta from the market model regression, its square, the residual variance from the market model regression, the I/B/E/S reported analyst forecast error of EPS as of the end of the previous fiscal year and its square.

Table 19

Dependent Variable	Q	Q	Q
Regression Type	**IV**	**F-M**	**FE**
MH%	29.503 (20.298)	0.443 (1.33)	0.086 (0.513)
$MH\%^2$	-49.138 (58.640)	-2.012 (-1.34)	0.474 (1.297)
TRA%	3.991*** (1.514)		
TRA-LVA%		1.221 (1.16)	1.541*** (0.515)
TRA-LGR%		3.403** (2.66)	4.048*** (0.579)
TRA-SVA%		-11.64*** (-3.23)	-4.592*** (0.381)
TRA-SGR%		3.659*** (6.07)	3.912*** (0.287)
QIX%	-0.780 (2.909)	0.134 (0.57)	0.186 (0.184)
DED%	11.307 (6.745)	-0.119 (-0.26)	-0.623*** (0.209)
RD	2.639*** (0.745)	0.628 (0.78)	1.364*** (0.333)
ADV	2.135 (1.369)	3.065** (2.98)	2.429*** (0.664)
LEVERAGE	-1.716*** (0.241)	-1.433*** (-7.95)	-1.411*** (0.114)
Log(Assets)		-0.079*** (-2.99)	-0.048** (0.020)
E-INDEX	-0.139*** (0.030)	-0.107*** (-5.86)	-0.102*** (0.015)
R^2(%)	7.17	40.74	20.59

Table 20
Conditional Specifications of the Firm Value – Ownership Relation

Table 20 presents the results of a sequence of Fama-Macbeth (F-M) and fixed effects (FE) regressions in which Tobin's Q is the dependent variable. MH%, TRA%, QIX% and DED% refer to the fraction of shares owned by management, transient, quasi-indexer and dedicated institutions respectively at the end of the current fiscal year. E-INDEX_1 is a dummy variable that takes on a value of 1 if a firm is in the top half of the sample by entrenchment index score and 0 if it is not. CASHVOL_1 is a dummy variable that takes on a value of 1 if a firm's volatility of EBITA measured over the previous 5 years is in the top half of the sample and 0 if it is not. F-DISP_1 that takes on a value of 1 if a firm is in the top half of the sample by standard deviation of analyst estimates of EPS and 0 if it is not. We interact each of the three dummy variables with our institutional ownership measures. With the exception of BETA, RESIDVAR, and F-DISP_1 (which are lagged by one fiscal year), all control variables are measured as of the end of the current fiscal year. ***, ** and * refer to statistical significance at the 1%, 5% and 10% levels respectively. All regressions include intercepts but these are not reported.

Table 20

Panel A		
Dependent Variable	**Q**	**Q**
Regression Type	**F-M**	**FE**
MH%	1.119**	0.745
	(2.25)	(0.554)
$MH\%^2$	-3.740*	-1.198
	(-1.95)	(1.408)
TRA%	2.256***	1.238***
	(5.31)	(0.209)
QIX%	-0.387	-0.161
	(-1.31)	(0.260)
DED%	-0.095	-0.263
	(-0.21)	(0.289)
TRA% x E-INDEX_1	-0.497	-0.534*
	(-1.39)	(0.311)
QIX% x E-INDEX_1	0.339	0.024
	(0.96)	(0.381)
DED% x E_INDEX_1	0.583	0.472
	(0.74)	(0.441)
RD	1.541**	2.433***
	(2.44)	(0.355)
ADV	2.781**	1.955***
	(2.84)	(0.717)
LEVERAGE	-1.643***	-1.729***
	(-6.86)	(0.124)
Log(Assets)	-0.020	0.024
	(-0.77)	(0.020)
E-INDEX_1	-0.122**	-0.246
	(-2.11)	(0.169)
R^2(%)	30.87	16.45

Table 20 (cont'd)

Panel B		
Dependent Variable	**Q**	**Q**
Regression Type	**F-M**	**FE**
MH%	0.944*	0.344
	(2.13)	(0.533)
$MH\%^2$	-3.222*	-1.179
	(-1.93)	(1.345)
TRA%	1.148	0.804***
	(0.98)	(0.217)
QIX%	-0.116	-0.233
	(-0.20)	(0.277)
DED%	1.009	0.315
	(0.89)	(0.328)
TRA% x F-DISP_1	0.934	-0.030
	(0.83)	(0.296)
QIX% x F_DISP_1	0.341	0.256
	(0.65)	(0.361)
DED% x F_DISP_1	-1.545	-0.472
	(-1.30)	(0.423)
RD	1.784**	2.615***
	(2.18)	(0.343)
ADV	2.541***	2.325***
	(2.96)	(0.689)
LEVERAGE	-1.335***	-1.487****
	(-5.89)	(0.118)
Log(Assets)	-0.002	0.017
	(-0.09)	(0.019)
E-INDEX	-0.128***	-0.138***
	(-12.50)	(0.015)
F-DISP_1	-0.313**	-0.527***
	(-2.14)	(0.158)
R^2(%)	39.69	17.91

Table 20 (cont'd)

Panel C		
Dependent Variable	**Q**	**Q**
Regression Type	**F-M**	**FE**
MH%	1.089	0.570
	(1.72)	(0.562)
$MH\%^2$	-3.289	-1.489
	(-1.68)	(1.409)
TRA%	0.425	0.735***
	(0.80)	(0.241)
QIX%	-0.146	-0.212
	(-0.64)	(0.274)
DED%	-0.655	-0.696**
	(-1.27)	(0.321)
TRA% x CASHVOL_1	2.742***	0.500**
	(3.78)	(0.242)
QIX% x CASHVOL_1	-0.144	0.119
	(-0.27)	(0.386)
DED% x CASHVOL_1	1.089	1.265**
	(1.65)	(0.439)
RD	1.667**	2.402***
	(2.78)	(0.397)
ADV	2.742**	2.376***
	(3.30)	(0.754)
LEVERAGE	-1.789***	-1.745
	(-7.09)	(0.125)
Log(Assets)	-0.009	0.006
	(-0.39)	(0.021)
E-INDEX	-0.129***	-0.144***
	(-13.10)	(0.016)
CASHVOL_1	-0.257*	-0.413***
	(-1.89)	(0.172)
R^2(%)	34.21	21.44

BIBLIOGRAPHY

Abarbanell, J.,Bushee, B.J., Raedy, J., 2003. Institutional investor preferences and price pressure: The case of corporate spin-offs. Journal of Business 76, 233-261.

Amihud, Y., 2002. Illiquidity and stock returns: cross section and time-series effects. Journal of Financial Markets 5, 31-56.

Ashbaugh-Skaife, H., Gassen, J., LaFond, R., 2006. Does stock price synchronicity represent firm-specific information? The international evidence. Working paper, MIT.

Bebchuk, L., Cohen, A., Ferrell, A., 2004. What matters in corporate governance? Working paper, Harvard.

Berle, A.A., Means, G.C., 1932. The modern corporation and private property (Macmillan, New York, NY).

Bessembinder, H., 2003. Quote-based competition and trade execution costs in NYSE-listed stocks. Journal of Financial Economics 70, 385-422.

Brennan, M., Chordia, T., Subrahmanyam, A., 1998. Alternative factor specifications, security characteristics and the cross section of expected returns. Journal of Financial Economics 49, 345-374.

Bushee, B.J, 1998. The influence of institutional investors on myopic R&D investment behavior. The Accounting Review 73, 305-333.

Bushee, B.J., 2001. Do institutional investors prefer near-term earnings over long run value? Contemporary Accounting Research 18.

Carhart, M., 1997. On persistence in mutual fund performance. Journal of Finance 52, 57-82.

Cho, M.H., 1998. Ownership structure, investment, and the corporate value: an empirical analysis. Journal of Financial Economics 47, 103-121.

Core, J.E., Larcker, D.F., 2002. Performance consequences of mandatory increases in executive stock ownership. Journal of Financial Economics 64, 317-340.

Coles, J.L., Lemmon, M.L., Meschke, J.F., 2003. Structural models and endogeneity in corporate finance: The link between managerial ownership and corporate finance. Working paper, Arizona State University.

Del Guercio, D., 1996. The distorting effect of the prudent-man laws on institutional equity investments. Journal of Financial Economics 40, 31-62.

Demsetz, H., Lehn, K., 1985. The structure of corporate ownership: Causes and consequences. Journal of Political Economy 93, 1155-1177.

Demsetz, H., Villalonga, B., 2001. Ownership structure and corporate performance. Journal of Corporate Finance 7, 209-233.

Diamond, D.W., 1984. Financial intermediation and delegated monitoring. The Review of Economic Studies 51, 393-414.

Durnev, A., Morck, R., Yeung, B., 2004. Value-enhancing capital budgeting and firm-specific stock return variation. Journal of Finance 59, 65-105.

Falkenstein, E.G., 1996. Preferences for stock characteristics as revealed by mutual fund portfolio holdings. Journal of Finance 51, 111-135.

Fama, E.F., Macbeth, J.D., 1973. Risk, return, and equilibrium: Empirical tests. Journal of Political Economy 71, 607-636.

Fama, E.F., French, K.R., 1992. The cross-section of expected stock returns. Journal of Finance 47, 427-465.

Fama, E.F., French, K.R., 1993. Common risk factors in the returns on stocks and bonds. Journal of Financial Economics 33, 3-56.

Gompers, P., Ishii, J., Metrick, A., 2003. Corporate governance and equity prices. The Quarterly Journal of Economics 118, 107-156.

Gompers, P., Metrick, A., 2001. Institutional investors and equity prices. The Quarterly Journal of Economics 116, 229-260.

Griffin, J.M., Kelly, P.J., Nadari, F., 2006. Measurement and determinants of international stock market efficiency. Working paper, University of Texas at Austin.

Hasbrouck, J., 2005. Trading costs and returns for US equities: estimating effective costs from daily data. Working paper, NYU.

Holderness, C.G., Kroszner, R.S., Sheehan, D.P., 1999. Were the good old days that good? Changes in managerial stock ownership since the great depression. Journal of Finance 54, 435-468.

Himmelberg, C.P., Hubbard, R.G., Palia, D., 1999. Understanding the determinants of managerial ownership and the link between ownership and performance. Journal of Financial Economics 53, 353-384.

Jensen, M.C., Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics 3, 305-360.

Jensen, M.C., 1986. Agency costs of free cash flow, corporate finance and takeovers. American Economic Review 76, 323-339.

Jones, C., Seguin, P., 1997. Transaction costs and price volatility: Evidence from commission deregulation. American Economic Review 87, 728-737.

Kang, J.-K., Stulz, R.M., 1997. Why is there a home bias? An analysis of foreign portfolio ownership in Japan. Journal of Financial Economics 46, 3-28.

Ke, B., Petroni, K., 2004. How informed are actively trading institutional investors? Evidence from their trading behavior before a break in a string of consecutive earnings increases. Journal of Accounting Research 42, 895-927.

Kelly, P.J., 2005. Information efficiency and firm-specific return variation. Working paper, University of South Florida.

Lakonishok, J., Lee, I., 2001. Are insider trades informative? The Review of Financial Studies 14, 79-11.

Lakonishok, J., Shleifer, A., Vishny, R.W., 1992. The impact of institutional trading on stock prices. Journal of Financial Economics 32, 23-43.

Lang, L.H.P., Stulz, R.M., Walkling, R.A., 1991. A test of the free cash flow hypothesis: The case of bidder returns. Journal of Financial Economics 29, 315-335.

LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1998. Law and finance. Journal of Political Economy 106, 1113-1155.

LeRoy, S.F., Porter, R.D., 1981. The present-value relation: tests based on implied variance bounds. Econometrica 49, 555-574.

Merton, R.C., 1987. A simple model of capital market equilibrium with incomplete information. Journal of Finance 42, 483-510.

McConnell, J.J., Servaes, H., 1990. Additional evidence on equity ownership and corporate value. Journal of Financial Economics 27, 595-612.

McConnell, J.J., Servaes, H., 1995. Equity ownership and the two faces of debt. Journal of Financial Economics 39, 131-157.

McConnell, J.J., Servaes, H., Lins, K.V., 2005. Changes in equity ownership and changes in the market value of the firm. Working paper, Purdue University.

Morck, R., Shleifer, A., Vishny, R.W., 1988. Management ownership and market valuation: An empirical analysis. Journal of Financial Economics 20, 293-315.

Morck, R., Yeung, B., Yu, W., 2000. The information content of stock markets: why do emerging markets have synchronous stock price movements? Journal of Financial Economics 58, 215-260.

Myers, S.C., 1977. Determinants of corporate borrowing. Journal of Financial Economics 5, 147-175.

Pound, J., 1988. Proxy contests and the efficiency of shareholder oversight. Journal of Financial Economics 20, 237-265.

Nofsinger, J.R., Sias, R.W., 1999. Herding and feedback trading by institutional and individual investors. Journal of Finance 54, 2263-2295.

Seyhun, H.N., 1986, Insiders' profits, cost of trading, and market efficiency. Journal of Financial Economics 16, 189-212.

Shiller, R.J., 1981. The use of volatility measures in assessing market efficiency. Journal of Finance 36, 291-304.

Stulz, R., 1988. Managerial control of voting rights: Financing policies and the market for corporate control. Journal of Financial Economics 20, 25-54.

Wahal, S., McConnell, J., 1997. Do institutional investors exacerbate managerial myopia? Working paper, Emory University.

Wermers, R., 1999. Mutual fund herding and the impact on stock prices. Journal of Finance 54, 581-622.

West, K.D., 1988. Dividend innovations and stock price volatility. Econometrica 56, 37-61.

Zhou, X., 2001. Understanding the determinants of managerial ownership and the link between ownership and performance: comment. Journal of Financial Economics 62, 559-571.