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This paper examines whether institutional investors exhibit preferences for near-term earnings over long-run value and whether such preferences have implications for firms' stock prices. First, I find that the level of ownership by institutions with short investment horizons (e.g., "transient" institutions) and by institutions held to stringent fiduciary standards (e.g., banks) is positively (negatively) associated with the amount of firm value in expected nearterm (long-term) earnings. This evidence raises the question of whether such institutions myopically price firms, overweighting short-term earnings potential and underweighting long-term earnings potential. Evidence of such myopic pricing would establish a link through which institutional investors could pressure managers into a short-term focus. The results provide no evidence that high levels of ownership by banks translate into myopic mispricing. However, high levels of transient ownership are associated with an over- (under-) weighting of near-term (long-term) expected earnings, and a trading strategy based on this finding generates significant abnormal returns. This finding supports the concerns that many corporate managers have about the adverse effects of an ownership base dominated by short-term-focused institutional investors.

Keywords
institutional investors, investor clienteles, managerial myopia, market efficiency

Disciplines
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Do Institutional Investors Prefer Near-Term Earnings over Long-Run Value?

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Abstract

Critics often argue that institutional investors have an excessive focus on short-term firm performance that leads corporate managers to make decisions to boost short-term earnings at the expense of long-run value. This paper examines whether institutional investors exhibit preferences for near-term earnings over long-run value and whether such preferences have implications for firms' stock prices. Using the Ohlson [1995] model, I separate firm value into three components—book value, expected near-term earnings, and expected long-term (terminal) value—and test whether institutions prefer firms for which more of firm value is expected to be realized as near-term earnings rather than as long-term earnings. The results indicate that the level of ownership by institutions with short investment horizons (transient institutions) and by institutions held to stringent fiduciary standards (banks) is positively (negatively) associated with the amount of value in near-term (long-term) earnings. This evidence indicates that institutions with the strongest incentives to favor firms with a high proportion of value in near-term earnings exhibit such preferences.

This evidence that banks and transient institutions prefer near-term earnings over long-run value raises the question of whether such institutions myopically price firms, overweighting short-term earnings potential and underweighting long-term earnings potential. Evidence of such myopic pricing would establish a link through which institutional investors could pressure managers into a short-term focus. The results provide no evidence that high levels of ownership by banks translate into myopic mispricing. However, high levels of transient ownership are associated with an over- (under-) weighting of near-term (long-term) expected earnings and a trading strategy based on this finding generates significant abnormal returns. This finding supports the concerns that many corporate managers have about the adverse effects of an ownership base dominated by short-term-focused institutional investors.

I. Introduction

A recurrent claim cited throughout the popular press and academic literature is that institutional investors have a myopic focus on short-term firm performance that leads corporate managers to make operational and accounting decisions to boost short-term earnings at the expense of long-run value (see, e.g. Jacobs [1991], Porter [1992], and Laverty [1996]). This paper examines whether institutional investors exhibit preferences for expected near-term earnings at the expense of expected long-run value and whether such preferences have any implications for the relative weighting of these components in firms' stock prices. A finding of institutional preferences for near-term earnings would provide evidence in support of the claim that managers feel pressure from institutions to myopically maximize near-term earnings. Such evidence would also raise the question of whether institutions myopically price firms, overweighting short-term earnings potential and underweighting long-term earnings potential. Evidence of such myopic pricing would establish a link through which institutional investors could pressure managers into a short-term focus.

Prior work has tested for institutional investor myopia with respect to near-term earnings by examining the relation between institutional trading and contemporaneous earnings news, finding a positive association (Lang and McNichols [1997], Eames [1998]). Because current earnings news has implications for longer-term earnings, it is difficult to determine from this approach whether institutions are reacting to current earnings *per se* or to the long-run implications of current earnings. To separate out preferences for near-term earnings from preferences for long-run value, I use a valuation model based on Ohlson [1995] that segregates firm value into components (book value, near-term earnings, long-run value) based on when the value will be realized through earnings. Using this decomposition, I can test for whether

institutions prefer firms with more value to be realized through near-term earnings rather than through long-term earnings. If a firm's institutional ownership is focused on expected earnings in the next few years, then the manager of that firm may have strong incentives to make decisions to meet or exceed that expected performance, even if the choices harm long-run value.

After controlling for numerous factors known to be important in determining the level of institutional ownership, I find that institutions as a whole have weak preferences for near-term earnings at the expense of long-term earnings, providing limited evidence in support of institutional investor myopia. However, disaggregating institutional investors into groups based on their incentives to prefer short-term earnings reveals significant heterogeneity in institutional preferences for the distribution of firm value. I find that the level of ownership by institutions with short investment horizons ("transient" institutions) and by institutions that are held to the most stringent fiduciary standards (bank trusts) is positively associated with the amount of value in near-term earnings and negatively associated with the proportion of value in long-term earnings. This evidence indicates that institutions with the strongest incentives to favor firms with a high proportion of value in near-term earnings exhibit such preferences.

To test whether institutional preferences for near-term earnings cause stocks to be priced myopically, I use a methodology similar to Abarbanell and Bernard [1998] (AB). AB regresses stock price on book value, the present value of near-term earnings, and the present value of a terminal value and find no evidence of myopic pricing by the market as a whole. However, if certain types of institutions exhibit strong preferences for near-term earnings over long-run value, then firms with high levels of such institutional ownership and with this distribution of value might exhibit myopic pricing due to the high institutional demand for the stock. I modify the AB regression to include interaction terms for firms with high levels of institutional

ownership to test whether institutions overpay (underpay) for near-term value (long-term value). Because a coefficient that differs from the hypothesized value in this test could either indicate mispricing or measurement error (AB), I also perform future returns tests to examine whether profitable trading strategies can be executed based on instances of apparent mispricing. Significant returns from these strategies would be consistent with mispricing, whereas insignificant returns would suggest measurement error.

The results indicate that high levels of ownership by transient institutions, who exhibit strong preferences for near-term earnings, are associated with overweighting of the near-term earnings component of value and underweighting of the long-term earnings component. The future returns test finds trading strategy returns that are consistent in sign with mispricing, and statistically significant two-to-three years after the portfolio formation date. Thus, transient institutions not only exhibit strong preferences for near-term earnings, but these preferences also translate into significant misvaluations. In the case of banks, the other group of institutions with strong preferences for near-term earnings, I find no significant evidence of mispricing when banks have high levels of ownership. Because I report that most banks have longer holding periods than transient institutions, these results suggest that short-term preferences of institutions only translate into mispricing when institutions also have short investment horizons.

The next section reviews the claims and evidence of institutional myopia and develops testable hypotheses. Section III presents the valuation model and methodology used to test the hypotheses. Section IV describes the sample and provides descriptive statistics on the constructs used in the empirical tests. Section V provides results, and Section VI contains a summary and conclusions.

II. Hypothesis Development

2.1 Do institutional investors prefer near-term earnings over long-run value?

As institutional investors became the dominant equity holder in the US during the past twenty years, many critics expressed concerns that the alleged short-term focus of institutional investors creates pressures on US managers to make decisions that sacrifice long-term value to meet short-term goals (see Lowenstein [1988], Jacobs [1991], Porter [1992], and Laverty [1996] for detailed descriptions of these concerns). For example, Drucker [1986] argues that "corporate managements are being pushed [by institutional investors] into subordinating everything (even such long-range considerations as a company's market standing, its technology, indeed its basic wealth producing capacity) to immediate earnings and next week's stock price" (p. 32). Whether or not institutions are actually applying this pressure, managers believe they are under such pressure. In a *Business Week*/Harris poll of 400 CEO's, 60% of the respondents cited institutional investors as a prime source of short-term performance pressure (Nussbaum [1987]).

Prior research on whether institutional investors exhibit a short-term focus in their investment decisions has found limited evidence to support this concern. Numerous papers have tested whether institutions prefer firms with lower levels of investment in long-term projects like R&D (Baysinger et al 1991, Hansen and Hill 1991, Wahal and McConnell 1998). The evidence generally indicates that institutional ownership is positively associated with R&D spending, implying that institutional investors are not myopic. Additionally, Rajgopal and Venkatachalam [1998] find no evidence that the level of institutional ownership is associated with income-increasing accruals, which suggests that institutions do not pressure managers to maximize near-term earnings. However, institutions could still be focused on short-term earnings performance if, in these cases, R&D or accrual changes are not needed to meet current earnings goals.

Looking at institutional myopia with respect to current earnings, Eames [1998] finds limited evidence of institutional trading in response to annual earnings news. However, Lang and McNichols [1997] find evidence of a positive relationship between changes in institutional holdings and both quarterly earnings forecast errors and quarterly revisions of forecasts of one-year-ahead earnings. This finding indicates a sensitivity to short-term earnings news, but does not necessarily imply myopia because longer-term earnings are likely highly correlated with the short-term news. Thus, the evidence to date on institutional short-sightedness is difficult to interpret due to the lack of a good methodology for showing that institutions prefer near-term earnings at the expense of longer-term earnings, as implied by the myopia argument.

This paper makes two methodological extensions to prior work to test for institutional preferences for near-term earnings over long-run value. First, using the Ohlson [1995] valuation model, I segregate firm value into three categories—book value, near-term abnormal earnings, and long-run (terminal) value—to control for the long-term value implications of near-term earnings realizations. Book value represents that component of firm value that has already been captured by the accounting system. The near-term abnormal earnings component represents firm value that will be realized through earnings in the next four years. Long-run value is the remainder of firm value, which will only be captured by the accounting system through earnings after four years. In regressing the level of institutional holdings on these three categories, the relative weightings indicate any institutional preferences over the timing with which firm value will be recognized into the financial statements.

Second, this paper uses the arguments for why institutions would have preferences for near-term earnings to focus on the types of institutions most likely to exhibit such preferences. There are two widely-cited sources of the alleged short-term focus by institutions: short expected

investment horizons and strict fiduciary responsibilities (Porter [1992], Graves and Waddock [1990]). Prior research indicates that institutions are not a homogeneous group along either of these dimensions (Del Guercio [1996], Lang and McNichols [1997], Bushee [1998]). These differences could lead to differences in the sensitivity of institutional investors to the distribution of future value. Thus, I test for short-term preferences of institutions classified along these two dimensions. First, I classify institutions based on the frequency of their trading to proxy for the length of their investment horizon. Second, I classify institutions based on their legal form (e.g. banks, pensions, etc.) to capture differences in fiduciary standards across types of institutions.

2.3.1 Classification based on investment horizon

A common explanation for why institutional investors have preferences for near-term earnings over long-run value is that they have short expected investment horizons (Graves and Waddock [1990], Porter [1992]). There is intense competition among some institutional investors for client funds to invest. Such competition engenders a quest for good portfolio performance in the short-run (Graves and Waddock [1990]).[1] This quest for short-term performance leads to the adoption of more aggressive trading strategies (such as market timing and technical analysis) at the expense of buy-and-hold investment strategies based on firm fundamentals.[2] Lowenstein [1988] argues that, "by encouraging an emphasis on trading rather than investing, they [institutional investors] focus the intelligence and energies of the investment community on short-term developments" (p. 64). This claim is reinforced by survey evidence that found that 55% of the institutional investors surveyed would sell a stock based solely on a

[1] Even if institutions have long-term investment goals, the vast majority of firm performance benchmarks are short-term oriented (e.g. quarterly earnings reports, monthly sales figures). These short-run firm performance measures naturally lead to the evaluation of fund managers over the same horizon, creating incentives for a short investment horizon (O'Barr and Conley [1992]).

[2] In support of this idea, Froot et al. [1992] model an equilibrium where, if speculators have short investment horizons, they will herd on the same short-term information, even if it is unrelated to firm value.

report of bad news about current or near-term performance in the *Wall Street Journal* (Pound and Shiller [1987]). Thus, short-term investment horizons of institutions, and the desire to try to earn trading profits based on near-term earnings, could translate into a preference for firms for which near-term earnings have a larger valuation impact.

To test for this effect, I classify institutions into groups based on their expected investment horizon. I use the classification method developed by Bushee [1998], who separates institutions into three groups based on their past portfolio management behavior. The first group of institutions, called "transient institutions," are characterized as having high portfolio turnover and highly diversified portfolio holdings. These characteristics reflect the fact that transient institutions tend to be short-term-focused investors whose interest in the firm's stock is based on the likelihood of short-term returns rather than long-term capital appreciation or dividends (Porter [1992]). As such, transient institutions are the group of investors argued to create incentives for managerial myopia due to the fact that a near-term earnings disappointment could trigger large-scale selling by such institutions and temporarily depress the firm's stock price (Porter [1992], Jacobs [1991]). In support of this argument, Bushee [1998] finds that managers are more likely to cut R&D expenditures to meet current earnings targets if their firm's ownership is dominated by transient institutions.

The other two types of institutions classified by Bushee [1998], "quasi-indexers" and "dedicated," provide long-term, stable ownership in firms as they are geared toward longer-term dividend income or capital appreciation. Dedicated institutions are characterized by large average investments in portfolio firms and extremely low turnover, consistent with a "relationship investing" role and a commitment to provide long-term patient capital (Porter [1992], Dobrzynski [1993]). Quasi-indexers are also characterized by low turnover, but they

tend to have diversified holdings, consistent with a passive, buy-and-hold strategy of investing portfolio funds in a broad set of firms (Porter [1992]). Because of the longer investment horizons of these two types of institutions, they should be less focused on near-term earnings and be more likely to have preferences that are insensitive to the distribution of future value.

If the institutions with short investment horizons (transient institutions) are more focused on near-term earnings because their information gathering is attuned to near-term news, and if firms with a higher percentage of value in near-term earnings provide more profit opportunities due to the larger expected valuation impacts of short-term news, then the following hypothesis should be supported:

> Hypothesis 1a: The level of institutional holdings by transient institutions will be positively (negatively) associated with the proportion of firm value in near-term earnings (long-run value).

The absence of a short investment horizon does not imply that such institutions will favor longer-term value, or will not still favor near-term value. Thus, the tests for dedicated and quasi-indexer institutions should be viewed as descriptive and as a benchmark to test whether investment horizon lengths are a determinant of institutional investor preferences for near-term earnings.

2.3.2 Classification based on fiduciary standards

A second explanation for the alleged short-term focus of institutions is that many institutions have a fiduciary duty to prudently invest funds on behalf of their clients. While diversification may seem prudent according to modern portfolio theory, many courts have made rulings consistent with the idea that each stock must be evaluated individually as to its merits (Badrinath, Gay, and Kale [1989]). Current earnings performance of portfolio firms is often used by clients and the courts as an objective criteria to judge the prudence of an investment (O'Barr and Conley [1992], Del Guercio [1996]. Thus, an institution may be sensitive to the

short-term earnings performance of each stock in its portfolio. Firms with a large proportion of their value contained in near-term earnings, which are forecasted by analysts, may appear as safer investments than firms whose market value is predominantly composed of more uncertain long-term expectations of growth.

To test for the impact of fiduciary restrictions, I split institutions into four groups based on their legal form: bank trusts, insurance companies, investment advisors (including mutual fund companies), and pensions and endowments. Prior research finds that this classification highlights significant differences across institutions in preferences for current earnings news and for certain firm characteristics like size and growth potential (Del Guercio [1996], Lang and McNichols [1997], Abarbanell, Bushee, and Raedy [1998]). Banks manage equities on the behalf of individuals and other institutions through their trust departments. They face strict fiduciary requirements that cause them to avoid stocks which courts would view as imprudent (Badrinath, Gay and Kale [1989], Del Guercio [1996]). Pensions and endowments consist of corporate (private) pensions, public pensions, and the endowments of universities and foundations. This group of institutions also faces fairly strict fiduciary responsibilities, though the prudent person standard has not been as strictly enforced on pensions as it has on bank trusts (O'Barr and Conley [1992], Del Guercio [1996]).

Insurance companies hold equities as an investment vehicle for their premiums and manage some private pension funds. In contrast to banks and pensions, these institutions are subject to less restrictive fiduciary constraints. Investment companies and advisors (hereafter investment advisors) manage individual investments through mutual funds and serve as external fund managers for pensions and endowments. Investment advisors are chosen as investment vehicles because they promise short-term liquidity; clients can generally withdraw their funds on

demand. Historically, investment advisors have been held to the least restrictive fiduciary responsibilities of any type of institution (Del Guercio [1996]).

Based on the above differences, preferences for near-term earnings are most likely to be manifested in those institutions that face the most restrictive fiduciary standards. Firms with a higher percentage of value expected to be realized in near-term, forecasted earnings will likely be viewed as safer investments than firms whose stock price mainly consists of expectations of value arising in distant periods. If differences in fiduciary restrictions are binding constraints on institutions' investment patterns and if firms with less value in long-term earnings are viewed as more prudent, the following hypothesis should be supported:

> Hypothesis 1b: The level of institutional holdings by banks and pensions will be positively (negatively) associated with the proportion of firm value in near-term earnings (long-run value).

Again, the tests for insurance companies and investment advisers should be viewed as descriptive and as a benchmark to test whether fiduciary standards are a determinant of institutional investor preferences for near-term earnings.

2.2 Do Institutional Investors Cause Stocks to be Myopically Priced?

While the above test provides evidence on the implicit investment preferences of institutional investors, it does not necessarily imply that these preferences should influence the investment horizons of corporate managers. For instance, O'Barr and Conley [1992] argue that most institutions take little interest in corporate governance; thus, short-sighted institutions would be more likely to sell out rather than try to influence the manager's investment pattern. To link institutional myopia to managerial myopia, critics have claimed that institutions not only prefer near-term earnings, but pay too much to get them (Lowenstein [1988]). In other words, the desire of institutions to hold firms with good expected near-term performance may cause a

firm's stock to be myopically priced, with near-term earnings overvalued and long-term earnings undervalued. Such mispricing could then lead current-price-maximizing managers to shift their investment horizon to a more short-term focus. Therefore, in my next set of tests, I examine whether some institutions cause firms to be myopically priced.

Prior research has again found limited evidence supporting the allegation that short-term preferences of institutional investors lead to mispricing. Using a similar breakdown of firm value into book value, near-term abnormal earnings, and long-run (terminal) value components, AB tests whether firms in the US stock market are myopically priced. They find that, on average, near-term earnings are not overvalued, but correctly priced. They also find that an apparent undervaluation of the terminal value is really measurement error, and that this portion of firm value is also likely correctly priced. However, their study groups together all firms, including those with little or no institutional ownership. Both Eames [1998] and Rajgopal and Venkatachalam [1998] run earnings response coefficient tests conditioning on the level of institutional ownership. Neither study finds evidence consistent with myopic mispricing by institutional investors. However, this result is not surprising given that they both find no evidence that institutional investors as a whole have preferences for short-term earnings. If only certain types of institutions exhibit short-term preferences, as predicted by hypotheses 1a and 1b, then a more powerful test of myopic mispricing is to focus on ownership by these types. If the preferences of such institutions for the timing of future earnings cause systematic deviations of price from intrinsic values, the following hypotheses will be supported:

> Hypothesis 2a: For firms with high levels of institutional ownership by transient institutions, the proportion of value in near-term earnings (long-run value) will be over- (under-) valued.

> Hypothesis 2b: For firms with high levels of institutional ownership by banks or pensions, the proportion of value in near-term earnings (long-run value) will be over- (under-) valued.

III. Methodology

3.1 Tests for Institutional Investor Preferences over the Timing of Future Earnings

The first step in developing the empirical tests is to separate firm value into components based on when the value is expected to be realized through the accounting system. The model used here is based on the AB empirical adaptation of the Ohlson [1995] valuation model.

Ohlson [1995] shows that by assuming clean surplus accounting—the change in book value is equal to earnings minus net dividends—the value of the firm (P_t) can be written in terms of accounting book value (b_t) and earnings (x_t), with r representing the cost of capital:[3]

$$P_t = b_t + \sum_{\tau=1}^{\infty} (1+r)^{-\tau} E_t\left[x_{t+\tau} - r \cdot b_{t+\tau-1}\right] \qquad (1)$$

From equation (1), AB note that the expected price-to-book premium at an arbitrary future horizon T is:

$$E_t\left[P_{t+T} - b_{t+T}\right] = \sum_{\tau=T}^{\infty} (1+r)^{-\tau} E_t\left[x_{t+\tau} - r \cdot b_{t+\tau-1}\right] \qquad (2)$$

The Value Line database provides forecasts of earnings, book values, and price-earnings ratios for up to four years ahead. Because point forecasts of earnings are not available beyond that horizon, I use four years as the point to demarcate the near-term from the long-term.[4] Substituting (2) into (1) at T = 4 yields the following expression, which segregates firm value in three components based on when it will be realized through the accounting system as earnings:

$$\begin{aligned} P_t &= b_t + \sum_{\tau=1}^{4} (1+r)^{-\tau} E_t\left[x_{t+\tau} - r \cdot b_{t+\tau-1}\right] + (1+r)^{-4} E_t\left[P_{t+4} - b_{t+4}\right] \\ &= BV_t + PVAX_t + PVTV_t \end{aligned} \qquad (3)$$

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[3] This relation is also based on the following assumptions: price is equal to the present value of all future dividends, there is risk neutral pricing, and there is a constant and nonstochastic term structure of interest rates.

The first component of (3), BV, represents that portion of firm value that has already been captured by the accounting system. The second component of (3), PVAX, is the present value of abnormal earnings over the next four years. This component captures the part of firm value that will be realized through accounting earnings in the near-term. The final component of (3), PVTV, is the present value of the forecasted terminal value four years hence. The terminal value represents all future earnings occurring beyond the four-year horizon, and thus represents that component of firm value that will take the longest to flow through the accounting system.

I calculate the variables BV, PVAX, and PVTV using forecast data from Value Line to proxy for market expectations, with firm-specific estimates of discount rates.[5] To test for institutional investor preferences for the distribution of value, I divide these variables by price to obtain the proportion of firm value in each of the three components and perform the following regression:

$$\begin{aligned} PIH_t &= \gamma_0 + \gamma_1(BV_t / P_t) + \gamma_2(PVAX_t / P_t) + \gamma_3(PVTV_t / P_t) + \varepsilon_t \\ &= \gamma_0 + \gamma_1 BVC_t + \gamma_2 AXC_t + \gamma_3 TVC_t + \varepsilon_t \end{aligned} \qquad (4)$$

where PIH is the percentage of institutional ownership and BVC, AXC, and TVC represent the price-deflated values of BV, PVAX, and PVTV, respectively. If institutions exhibit no preferences over when value is realized through the accounting system and instead choose their level of ownership based on other factors (such as stock returns, stock ratings, etc.), the coefficients on AXC and TVC should not be different from zero. If institutions prefer value to

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[4] Depending on the degree of institutional investor myopia, four years might be too long to accurately measure the "near-term." To explore this possibility, I also run all of the tests defining the near-term to be one year ahead. These results are discussed in Section V.

[5] Prior research has used *ex post* realizations (Penman and Sougiannis [1998]) and time-series forecasts from historical data (Frankel and Lee [1998]) to calculate implicit value using the Ohlson model. The advantages of the Value Line data are that it provides an *ex ante* expectation and that it is not subject to the intertemporal inconsistency problem identified by Myers [1999]. Also, Value Line provides forecasts of earnings, dividends, and book values that are consistent with clean surplus in over 90% of the observations. The disadvantage of Value Line data is that it represents only one analyst's expectations and that it exhibits the optimistic bias typically found in analyst forecast data.

be realized through the accounting system in near-term earnings rather than in long-term earnings, the test should yield the following estimated coefficients:

$$H1_A : \gamma_2 > 0, \gamma_3 < 0 \qquad \text{(Hypothesis 1)}^6$$

I make no formal hypotheses concerning the coefficient on BVC since the myopia arguments deal with the trade-off between near- and long-term expected earnings, and not the total amount of unrecorded goodwill a firm has (i.e. whether it is a value firm or a growth firm).

An important drawback to estimating equation (4) as stated is that it is susceptible to a correlated omitted variables problem. Prior research shows that institutions choose their level of ownership based on other factors such as size, growth, performance, risk, stock ratings, and liquidity, all of which are likely correlated with the distribution of firm value. To address this problem, I include a number of control variables to capture these relations.

I include firm size (SIZE), measured as the log of market value of equity, to control for institutions' preferences for large firms. Institutions prefer large firms due to concerns over prudent person standards, the desire for liquidity, and the presence of lower information asymmetries (Del Guercio [1996], Gompers and Metrick [1998]). Related to this variable, I explicitly control for the firm's S&P stock rating (RATE) and number of years the firm has been listed (TIME), both of which could be important measures of the prudence of an investment (Badrinath, Gay, and Kale [1989], Del Guercio [1996]). I also directly control for the firm's liquidity (LIQ), measured as the average trading volume in the firm's stock divided by the average shares outstanding (Badrinath, Gay, and Kale [1989], Del Guercio [1996], Falkenstein [1996], Gompers and Metrick [1998]). Next, I add an indicator variable for whether a firm is listed on the Standard & Poor's (S&P) 500. This variable is positively associated with

institutional holdings due to the fact that many institutions index some portion of their equity holdings (Del Guercio [1996], Gompers and Metrick [1998]). Institutions have also been shown to have preferences for firms that pay dividends, so I include the firm's dividend yield (YIELD), measured as the ratio of dividends to price (Badrinath, Gay, and Kale [1989], Del Guercio [1996], Falkenstein [1996], Gompers and Metrick [1998]).

I include three variables to proxy for the riskiness of the firm. Systematic risk is proxied by the firm's market-model beta (BETA), total risk is proxied by the standard deviation of returns (STD), and risk of losses in case of bankruptcy is proxied by the firm's leverage ratio (LEV), which is measured as the ratio of debt to assets. Prior research finds that institutions generally prefer firms with high BETA, but low STD and LEV (Badrinath, Gay, and Kale [1989], Falkenstein [1996]). The firm's market-adjusted returns (MAR) over the past year are included to control for recent market performance, which has been shown to be positively associated with institutional holdings (O'Brien and Bhushan [1990], Falkenstein [1996], Lang and McNichols [1997], Gompers and Metrick [1998]). To proxy for preferences for growth firms, I include the firm's average sales growth (SGR) over the prior three years. This variable has not been examined by prior research, but is important to include to ensure that the firm value components are not proxying for recent growth. Finally, I include the firm's R&D intensity (R&D), measured as the ratio of R&D expense to sales. Prior research has tested for institutional myopia using this variable, generally finding that institutional ownership is positively associated with R&D spending (Baysinger et al [1991], Wahal and McConnell [1998]).

After including all of the control variables, the final empirical specification of the test is as follows:

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[6] If the Value Line forecasts serve as poor proxies for market expectations, then the resultant errors-in-variables problem will bias the coefficients towards zero. Thus, the presence of measurement error in the forecasts works

$$PIH_t = \gamma_0 + \gamma_1 BVC_t + \gamma_2 AXC_t + \gamma_3 TVC_t + \gamma_4 SIZE_t + \gamma_5 LEV_t + \gamma_6 SP500_t + \gamma_7 MAR_t + \gamma_8 BETA_t + \gamma_9 STD_t + \gamma_{10} LIQ_t + \gamma_{11} YIELD_t + \gamma_{12} R\&D_t + \gamma_{13} TIME_t + \gamma_{14} RATE_t + \gamma_{15} SGR_t + \varepsilon_t \quad (5)$$

To test for differences in myopia across types of institutions, I replace PIH in equation (5) with the percent holdings by each group of institution, denoted as DED (dedicated), QIX (quasi-indexer), TRA (transient), BNK (banks), INS (insurance companies), IA (investment advisers), and P&E (pensions and endowments).

3.2 Tests for Myopic Pricing

3.2.1 Price level test

The next set of tests examines whether institutional preferences for the distribution of future earnings translate into the mispricing of stocks. If there is heavy demand by certain institutions for firms with a high (low) proportion of value in near-term earnings (long-run value), such institutions may place too much weight on near-term earnings and too little weight on long-term earnings in valuing the firm. I test for these effects using the methodology of AB, who test whether the US stock market, as a whole, exhibits myopic mispricing.

Based on equation (3), AB test for myopic pricing with the following regression:

$$P_t = \alpha_0 + \alpha_1 BV_t + \alpha_2 PVAX_t + \alpha_3 PVTV_t + \eta_t \quad (6)$$

Because each component is discounted to present value, an extra dollar of PVAX or PVTV should increase price by a dollar, indicating an expected coefficient of one on each of the regressors. Also, as indicated by equation (3), the intercept should be zero because value is completely explained by the three value components. AB report estimated coefficients that are not significantly different from one for both BV and PVAX, and a coefficient significantly less

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against finding results in support the myopia hypothesis.

than one on PVTV. These results only partially support myopic mispricing for the market as a whole.[7]

To test whether mispricing is concentrated in firms with high levels of short-sighted institutional investors, I interact the variables in equation (6) with an indicator variable (DPIH) for high levels of institutional ownership. I define the indicator variable DPIH to be equal to one if the firm's institutional ownership of a given type is in the top decile of PIH for all firms during the year and zero otherwise (with PIH replaced by the variables for ownership by each group of institutions identified earlier).[8] This approach produces the following model:

$$P_t = \alpha_0 + \alpha_1 DPIH_t + \alpha_2 BV_t + \alpha_3 (BV * DPIH)_t + \alpha_4 PVAX_t + \alpha_5 (PVAX * DPIH)_t + \alpha_6 PVTV_t + \alpha_7 (PVTV * DPIH)_t + \eta_{jt} \quad (7)$$

In this model, the null hypothesis of efficient pricing would be:

$H2_0 : \alpha_0 = \alpha_1 = 0,\ \alpha_2 = \alpha_4 = \alpha_6 = 1,\ \alpha_3 = \alpha_5 = \alpha_7 = 0$ (Null hypothesis of no mispricing)

The alternative hypothesis that high levels of institutional ownership cause firms to be priced myopically relative to the theoretical weighting is:

$H2_A : \alpha_4 + \alpha_5 > 1,\ \alpha_6 + \alpha_7 < 1$ (Hypothesis 2)

Thus, if firms with high institutional ownership of a given type are mispriced, this hypothesis requires that 1) the coefficient on the interaction term be significantly different from zero and 2) the sum of the two coefficients on each variable be significantly different from one.

3.2.2 Future returns test

As AB discuss, measurement error in the proxies for market expectations of future value or for the discount rate would bias the coefficients away from one and give the appearance of

[7] AB perform future return tests which indicate that the possible mispricing is actually measurement error. These tests are discussed in the next section.

improper weighting by the market. To determine whether measurement error or mispricing is driving the above results, AB implement a future returns test. If an apparent mispricing is due to myopic preferences, then the mispricing should be reversed as the future earnings become realized, generating predictable future abnormal returns. However, if the apparent mispricing is solely due to measurement error, then no future abnormal returns should be observed. Because the potential mispricing pertains to earnings forecasts as much as four years in the future, I examine abnormal returns for up to five years into the future.

To perform the future returns test, I adopt a "Fama and McBeth" methodology similar to the approach used by Abarbanell and Bushee [1998]. This approach involves first calculating scaled decile ranks for each value component (denoted RBVC, RAXC, and RTVC).[9] The scaled decile rank is computed by forming deciles of the distribution of each independent variable in each year (after all of the forecasts are released to the public), and then dividing the decile rank by nine so that the scaled decile rank ranges between zero and one. To test for institutional influence on mispricing, each value component variable is interacted with the decile of institutional ownership (RPIH) to produce a scaled rank variable that represents a strategy that takes long (short) positions in firms with high (low) value component values *and* high (low) levels of institutional ownership.[10] This approach produces the following regression:

$$\begin{aligned} CAR(I)_t = {} & \beta_0 + \beta_1 RBVC_t + \beta_2 (RBVC * RPIH)_t + \beta_3 RAXC_t + \beta_4 (RAXC * RPIH)_t \\ & + \beta_5 RTVC_t + \beta_6 (RTVC * RPIH)_t + \beta_7 RSIZE_t + \beta_8 RBETA_t + \beta_9 REP_t + \xi_{jt} \end{aligned} \quad (8)$$

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8 I chose deciles to ensure that firms in the highest group had substantially high institutional ownership of each type. I re-ran all of the tests using quintiles, and the results were similar, but less significant. Thus, the decile approach is necessary to get sufficient power to detect the effect of institutional ownership on pricing.

9 Because returns are the dependent variable, BV, PVAX, and PVTV are deflated by beginning price, yielding the BVC, AXC, and TVC variables used in the institutional holdings test.

10 To compute this scaled rank variable, the decile of the value component (1,10) is multiplied by the decile of institutional ownership (1,10) to obtain a value between 1 and 100. Then, this value is rescaled to range between 0 and 99, and finally divided by 99 to get a variable that ranges between 0 and 1.

where CAR(I) are the buy-and-hold size-adjusted abnormal returns cumulated from the seventh month after the fiscal year end to the same time I years later, I = 1, 2, 3, 4, and 5. The decile ranks of size (RSIZE), beta (RBETA), and the earnings-price ratio (REP) are included to capture any return impacts due to factors identified by Fama and French [1992].[11] An individual coefficient in this specification represents the abnormal return to a zero-investment portfolio optimally formed to exploit the information in the associated independent variable that is orthogonal to the information in the other variables (Abarbanell and Bushee [1998]). If institutional myopia leads to mispricing, the coefficient on RAXC*RPIH (RTVC*RPIH) should be significantly less (greater) than zero over some horizon as the mispricing reverses itself. To test for myopic pricing by the various groups of institutions, I replace RPIH in equation (8) with ownership variables for each of the groups of institutions identified earlier.

IV. Sample and Descriptive Statistics

4.1 Sample

The sample includes all firm-years between 1980 and 1992 with available data on Value Line, Spectrum, Compustat, and CRSP. The final sample consists of 10,380 firm-years, with 673-973 observations per year.

The forecasts of future earnings, book values, and prices are obtained from the University of Michigan Value Line database, which contains electronic versions of Value Line reports for the years 1978-92. Using the Value Line report issued during the third quarter of a firm's fiscal year, forecasts are available for the next fiscal year, the year after, and a long-range forecast labeled "three-to-five years" ahead. Following AB, these three-to-five year forecasts are assumed to be forecasts for four-years ahead. A three-year-ahead forecast is also required by the

[11] The other main Fama-French factor is book-to-market, which is captured in the BVC variable.

model, and is obtained by interpolating between the two-year-ahead and four-year-ahead forecasts. The forecast of long-run (terminal) value is calculated by multiplying the long-range P/E forecast by the long-range earnings forecast to obtain a predicted price. The forecasted terminal value is the difference between this price and the long-range forecast of book value.

Historical book values and many of the control variables are obtained from the 1997 Compustat Annual Files. The price at the end of the firm's second quarter, cumulative size-adjusted abnormal returns, and data for some of the control variables are collected from the 1997 CRSP Daily Return Files. The price at the end of the second quarter is used to roughly correspond with the date of the Value Line forecast. Buy-and-hold size-adjusted returns are calculated as the difference between the cumulative raw returns of the firm over a given horizon and the contemporaneous return on an equally-weighted size decile control portfolio.

The firm-specific discount rate used to calculate the present values of future earnings and terminal value is calculated using the CAPM with firm-specific betas and an assumed risk premium over the risk-free rate of 8% (AB).[12]

The institutional investor holdings data are obtained from the Harvard Business School Spectrum database, which contains all 13-f filings between 1980 and 1997. According to SEC Rule 13f-1, all institutions managing more than $100,000,000 in holdings must file a 13-f with the SEC at the end of every calendar quarter. The 13-f must report all equity holdings greater than 10,000 shares or $200,000 in market value. Thus, the data used in this study reflect end-of-calendar-quarter holdings for those fund managers filing 13-f's. The holdings data are collected as of the end of the third calendar quarter, which is the first holdings date available after the release of the Value Line forecasts.

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[12] I also estimated the variables using a 6% risk premium and using constant discount rates of 11%-15%. There were no qualitative differences in results under these alternative approaches.

Institutions are classified into the three groups using a factor and cluster analysis approach described in Bushee [1998].[13] Panel A of table 1 describes the mean portfolio characteristics (in terms of standardized factor scores) of the three types of institutional investors. Transient institutions (TRA) have high portfolio turnover (high PTURN factor) and diversified portfolios (low BLOCK factor), as well as preferences for smaller firms (low FSIZE factor). Dedicated institutions (DED) have low turnover and more concentrated portfolio holdings (high BLOCK factor), and also tend to prefer smaller firms. The quasi-indexer institutions have low turnover and diversified holdings, and tend to hold larger firms (consistent with many index strategies). The proportion of institution-years in each group is roughly similar to that reported in Bushee [1998] over a different sample period.

Institutions are classified into types based on the classification provided on the Spectrum database. Spectrum identifies five classes on institutions: banks, insurance companies, investment companies, independent investment advisers, and "other", which includes internally-managed public and private pension funds, colleges and universities, foundations, and other miscellaneous institutions (e.g. law firms, private citizens acting as institutions, etc.). I use the bank (BNK) and insurance companies (INS) categories as reported. I combine the investment companies and independent investment advisors into one category called "investment advisors" (IA) because the two Spectrum categories are very similar in their fiduciary standards and fund sponsors. Finally, I drop an institution that is not clearly a pension, university, or foundation endowment to form the final group, pensions and endowments (P&E). Panel B of table 2 shows

[13] This approach starts with a large number of variables that have been used by prior research to describe institutional investor trading behavior and portfolio characteristics. To account for the high degree of multicollinearity among these variables, principal factor analysis is used to generate a small number of common factors that explain the shared variance among the original variables. Institutions are then classified into groups using k-means cluster analysis on the factor scores.

a cross-classification of institutional groups. There is a significant amount of heterogeneity across the two classification methods, so one method is not a proxy for the other.

4.2 Descriptive Statistics

Table 2 presents descriptive statistics for the value component variables, the control variables, and the institutional ownership variables. The table indicates that the near-term earnings component (AXC) is a relatively small component of firm value for most firms. The majority of the average firm's value is concentrated in book value or terminal value. In fact, AXC is negative on average, indicating that many firms in the sample have negative expected abnormal earnings in the near-term (note that this does not mean they have negative expected earnings). Summing the median levels of BVC, AXC, and TVC yields a value of 1.04, which indicates that Value Line analysts are slightly more optimistic than the market's expectation.

Table 2 also indicates that the sample firms tend to be larger than the population of firms, which is not surprising given the constraint of Value Line following. About 36% of the firm-years were listed on the S&P 500, and the average time listed is 18 years, indicating a sample of rather mature firms. The mean level of institutional holdings over the sample period is 36%, of which the largest portion is held by pensions and endowments (12%). Investment advisers have the next largest holdings (9.6%), followed by banks (8%), and insurance companies (3.7%). The classification of institutions by portfolio management characteristics indicates that the majority of holdings are by quasi-indexer institutions (20%).

Table 3 reports Pearson and Spearman correlations among the variables used in the empirical tests. There is a high negative correlation between the percent of value already recorded by the accounting system (BVC) and the percent to come in the future (AXC and TVC). However, there is not a trade-off between near-term and long-term earnings, indicated by

the significant positive correlation between AXC and TVC. Thus, tests of myopic preferences using short-term earnings alone would miss this correlation with future value. Almost all of the institutional holdings variables are significantly positively correlated with each other. Thus, there is no evidence that low ownership by one type of institution is systematically offset by higher ownership by another type. The univariate evidence on the relationship between the levels of institutional ownership and the amount of firm value in a given component indicates, in general, a negative correlation with the book value component and a positive correlation with the near- and long-term earnings components. However, because the value components are correlated with the many of control variables, the effect of the value components *per se* on institutional ownership is difficult to discern without a multiple regression analysis.

Table 3 also indicates that many of the univariate correlations are substantial in magnitude, indicating the multicollinearity may be a problem in the sample. To test this possibility, I performed variance inflation factor (VIF) analyses on each yearly regression in each of the empirical tests. VIF's are based on the R^2 from regressing each independent variable on all other independent variables. A VIF of one indicates no multicollinearity and a VIF in excess of 10 indicates harmful multicollinearity (Kennedy [1992]). The highest VIF encountered was 5.7, which while high is far below the cutoff for harmful multicollinearity. I also performed principal factor analysis on the control variables to account for the multicollinearity and reduce the set of variables to two linear combinations (a "size" factor and a "risk" factor) that explain most of the shared variance. Including these factors in the regression in lieu of the individual variables produces coefficients on the value components that are similar in magnitude but more strongly significant.

V. Results

5.1 Evidence on Institutional Investor Preferences for the Timing of Future Earnings

Panel A of table 4 provides results of the regression of institutional ownership on the three components of firm value and the control variables (equation (4)). To mitigate the problem of cross-sectional correlation inherent in a pooled cross-sectional regression (Bernard [1987]), regressions are run for each individual year, and the mean coefficient across years is reported.[14] Because the dependent variable is a levels variable, an adjustment for serial correlation in the yearly coefficients is made in calculating the standard errors for the mean coefficients (AB). Column 1 provides results for total institutional ownership (TIH), which allows a comparison to prior research that has looked only at the preferences of institutions as a whole. Ceteris paribus, institutions as a whole prefer firms with a higher proportion of value in unrecorded goodwill (i.e. "growth" firms), as indicated by the negative coefficient on BVC. The mean coefficient on the near-term earnings component (AXC) is positive and the mean coefficient on the long-term earnings coefficient (TVC) is negative. These findings are consistent with institutional investors as a whole having preferences for more value in near-term earnings than in long-run value, but neither coefficient is significant. Thus, the assertion that all institutions are short-sighted is not supported by the data.

Columns 2-4 of table 4 provide results for institutional ownership classified by investment horizon. Transient investors (TRA) significantly prefer firms with more value in near-term earnings (AXC) and with less value in long-term earnings (TVC). Both results are consistent across years, as the coefficient on AXC (TVC) is positive (negative) in 10 (11) of 13 years (not reported). Thus, transient institutions exhibit preferences consistent with institutional

investor myopia, supporting Porter's [1992] view that this type of investor is most likely to create pressure for strong short-term earnings performance (hypothesis 1a). Transient investors also significantly prefer firms with less value in book value, and their preferences drive the observed results for overall institutional ownership. Dedicated (DED) and quasi-indexer (QIX) institutions exhibit no significant preferences for the distribution of a firm's earnings other than a preference by dedicated institutions for firms with less value in the terminal value component.

Columns 5-8 of table 4 provide results for institutional ownership classified by the fiduciary standards of the institution. The results generally support hypothesis 1b that fiduciary standards impact institutional preferences for a firm's distribution of value. Banks (BNK), which face the most stringent fiduciary standards, exhibit a significant preference for near-term earnings and a significant dislike of the long-term earnings component. This result is also consistent across years, having the same sign in 11 of 13 years for both AXC and TVC (not reported). On the other hand, investment advisers (IA) and insurance companies (IC), which face more lenient fiduciary standards, exhibit a significant preference for firms with less value in near-term earnings. For pensions and endowments (P&E), none of the value component variables are significant, indicating that other variables are more important in determining the investment decisions of this type of institution.

The results for the control variables in table 4 indicate that there are many significant determinants of institutional investor ownership other than the distribution of earnings. Thus, it is unlikely that the value component variables are proxying for some other factor previously shown to influence institutional investment. Notably, all types of institutional ownership (expect banks) are significantly positively related to R&D intensity, a common metric for measuring

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[14] An analysis of the distribution of each of the independent variables revealed some outliers. As a result, all observations in the extreme 1% tails of the distribution were windsorized. The results for the sample of raw data are

institutional investor myopia. Thus, confirming much of prior research, institutions do not seem to be myopic with respect to R&D spending. Rather, certain types of institutions exhibit short-term preferences for expected earnings performance.

5.1.1 Sensitivity analyses

To examine whether the results are sensitive to the definition of "near-term" (i.e. whether four-years is too far ahead to capture short-term preferences), I recalculated AXC and TVC based on a one-year ahead cut-off. I define AXC1 to be the present value of abnormal earnings one-year ahead and TVC1 to be the present value of the terminal value after one year (this is computed by moving the present value of abnormal earnings for years 2-4 into the TVC term). Panel B of table 4 presents results for this redefinition of near-term earnings. For total institutional ownership (column 1), the results are similar in sign to those in panel A, with larger, though still insignificant, mean coefficients.

The results for the preferences of different groups of institutions mirror those in panel A, with the coefficients generally larger and more significant. One notable change in results is that the coefficient on TVC1 in the pension and endowment regression is significant at 0.05 level, whereas the coefficient on TVC was insignificant. Thus, despite rather stringent fiduciary responsibilities, pensions exhibit a propensity to invest in firms with a high proportion of future value expected beyond the next year, possibly because such institutions tend to have long investment horizons (see table 1). However, pensions also exhibit a weak preference for firms with higher amounts of value in book value, so the amount of value in unrecorded goodwill for firms held by pensions is likely not large. Overall, the results in panel B of table 4 indicate that, when institutions exhibit myopic preferences, they are manifested through preferences for a firms with a higher percentage of value in the next year's earnings.

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similar in significance, though the coefficients are smaller in magnitude.

As an additional test of institutional sensitivity to the distribution of earnings, I regressed three-year changes in institutional ownership on three-year changes in the value components and in the control variables. Three-year changes were chosen because they exhibited more dispersion in the changes in value components than one- and two-year changes. Table 5 presents results of this regression for both the four-year horizon (panel A) and the one-year horizon (panel B). Changes in total institutional ownership are positively associated with changes in the amount of value in near-term earnings, especially when the near-term is defined to be one-year (CAXC1). This change is significantly driven by changes in both transient ownership (CTRA) and in bank ownership (CBNK), confirming the results from the levels regression. Changes in bank and transient institutional ownership are sensitive to changes in the amount of value in terminal value, but only when terminal value is defined based on the four-year horizon (CTVC). Thus, table 5 indicates that the observed preferences of banks and transient institutions for near-term value is mostly focused on earnings in the next year and that the dislike of long-term value by these two types is driven changes in value expected to occur more than four years out.

5.2 Evidence on Myopic Pricing by Institutions

5.2.1 Price level tests

Table 6 presents results for the tests of whether institutions cause stocks to be myopically priced. Again, I use a yearly regression approach with mean coefficients and p-values based on adjusted standard errors reported in the table. Panel A presents results without institutional ownership interactions, replicating the results in AB. The coefficients on BV and PVAX are not significantly different from one, whereas the coefficient on PVTV is significantly less than one for the four-year horizon (in this table, the first p-value tests whether the coefficient is different

from zero, the second tests whether it is different from one, which is the null hypothesis). For the one-year horizon, the coefficient on PVAX is significantly greater than one, and the coefficient on PVTV remains significantly less than one. These results are similar to those reported by AB and are consistent with mispricing. However, in the future returns tests, AB finds that these overall results are more consistent with a measurement error explanation (a result confirmed later in this paper). Whether the differences are due to measurement error or mispricing, these results serve as the benchmark for the subsequent tests that interact the value component variables with indicators for high institutional ownership by type of institution.

Panel B of table 6 provides results of the price regression with interactions for high levels of institutional ownership classified by investment horizon (equation (7)).[15] The indicator variables for high levels of ownership by both transient and quasi-indexer institutions are significantly different from zero, indicating that the valuation model understates market value on average for firms highly owned by these institutions. The coefficient on PVAX*DTRA (PVTV*DTRA) is significantly greater (less) than zero, and the implied total coefficient is significantly greater (less) than one, which supports hypothesis 2a that high levels of transient investor ownership are associated with overvaluation of near-term earnings and undervaluation of long-run value. The only other significant interaction in panel B is between PVAX and DQIX, indicating that higher ownership by quasi-indexers is associated with an apparent overvaluation of near-term earnings. A possible explanation for why the results for QIX parallel those for TRA in this regression is that there is some time-series instability in the classification scheme, such that some institutions (about 20% per year) move between the two categories over time. This instability is due to the fact that the Spectrum data aggregates all funds within a fund

family and thus changes in the relative size of the various funds in a fund family can cause its classification to switch between groups.

Panel C of table 6 presents results for the classification of institutions by fiduciary standards. The interactions between the indicator for high bank ownership (DBNK) and both PVAX and PVTV are not significantly different from zero. The result does not support hypothesis 2b that high levels of bank ownership lead to significant mispricing. The interaction between PVAX and DIA is significantly different from zero in the one-year horizon regression, which indicates a relation between investment advisor ownership and overweighting of near-term earnings. Because the results in table 4 indicate a negative relation between IA ownership and this component of value, this result is not consistent with demand-driven mispricing and likely reflects some other unknown effect. The only other significant interaction in the panel is between the indicator for high insurance ownership (DINS) and PVTV, which suggests that high ownership by insurance companies lead to less underweighting of the terminal value (though the implied total coefficient is still significantly less than one).

5.2.2 Future return tests

Table 7 reports results for the future returns test (equation (8)). This test provides evidence on whether the price level tests in table 6 are likely driven by mispricing or by measurement error in the implicit value variables. The table does not report intercepts, which are always insignificant, or the RSIZE, RBETA, and REP variables, which are generally significantly negative, insignificant, and weakly significantly positive, respectively. Panel A presents results without institutional ownership interactions. The coefficients on RBVC are generally positive and significant, indicating a significant book-to-market effect in the data that

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[15] I omit the results for institutions as a whole because the results in tables 4 and 5 indicate little evidence of short-sighted preferences among institutions as a whole, and the mispricing tests find no significant evidence of

is consistent with prior research (Fama and French [1992]). Consistent with AB, the coefficients on RAXC (RTVC) are positive (negative) and often significant. Note that these returns go in the opposite direction of a myopic mispricing effect, which would lead to negative (positive) future returns to the RAXC (RTVC) components. Thus, the deviations of the coefficients from theoretical values reported for all firms in table 6 is likely a product of measurement error in the calculation of value or some uncontrolled for risk factor. Whatever the cause, these results serve as the benchmark for looking at differences in stocks largely held by institutional investors. In the following tests, I control for the returns to these unconditional strategies in looking at the returns to strategies that interact the value component with the level of institutional ownership.

Panel B of table 7 reports results for trading strategies based on interactions between value components and the level of ownership by institutions classified by investment horizon. The analogous panel in table 6 indicated that high levels of transient institutional ownership are associated with a higher (lower) multiple on near-term earnings (long-run value) than expected, suggesting potential misvaluation. Table 7 indicates that the coefficients on the RAXC*RTRA variables are consistently negative, and the coefficient after two years is significantly less than zero for both one-year and four-year horizons. These implied negative portfolio returns are consistent with transient institutions mispricing near-term earnings, which supports hypothesis 2a. The coefficients on RTVC*RTRA are consistently positive and are significant in the two-to-three year return period. These implied positive returns are consistent with transient institutions undervaluing the long-run value component, again supporting hypothesis 2a. Thus, the results of tables 4-7 indicate that transient institutions not only prefer firms with more (less) value in near-term (long-term) earnings, but their ownership is associated with systematic mispricing of these components.

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mispricing based on high levels of overall institutional ownership.

Panel D of table 7 presents results for interactions based on the fiduciary standards of the institution. The results in table 6 indicated no misvaluation of future earnings based on high levels of bank ownership, and the results in table 7 confirm that there are no abnormal future returns produced by strategies based on the level of bank ownership. Thus, there is no evidence to support hypothesis 2b. Overall, the results from tables 4-7 suggest that, while banks have preferences for firms with higher (lower) proportions of value in near-term (long-term) earnings, they do not push the market price away from implicit value to acquire ownership in such firms.

VI. Summary and Conclusions

The goal of this paper was to examine the common contention that institutional investors are short-sighted in preferring more of a firm's value to be realized in near-term, rather than long-term, earnings. Such preferences are to be expected if competitive pressures, prudent person standards, and frequent performance evaluations all conspire to drive fund managers to search for stocks which will produce solid earnings in the near-term, even at the expense of long-run value. The results indicate that institutions as a whole exhibit only weak preferences for firms with a higher proportion of value in near-term earnings and a smaller proportion in long-term earnings. However, institutions that face the strictest fiduciary standards (banks) and have the shortest investment horizons (transient institutions) exhibit strong preferences for near-term earnings over long-run value. Thus, managers of firms with a high (low) percentage of value in near-term (long-term) earnings and high levels of ownership by banks and transient institutions likely face the strongest incentives to make myopic decisions to please their investor bases.

Given that banks and transient institutions exhibit myopic preferences for near-term earnings, the paper next tests whether these institutions pay too much for near-term earnings and

too little for long-term value, causing stocks to be myopically priced. If such institutions drive such myopic pricing, it is likely to be manifested in firms with a high percentage of ownership by such institutions. For these firms, institutions are most likely to be the price setters, and competition among institutions to own these firms (which presumably have a desired distribution of future earnings) could cause misvaluation of future earnings. Although banks exhibit preferences for near-term earnings over long-run value, these preferences do not translate into significant mispricings. However, the results indicate that high levels of ownership by transient institutions are associated with significant over- (under-) weighted of the near-term (long-term) earnings component of value, and that significant future returns are observed on strategies that exploit this finding. Thus, transient institutions not only exhibit strong preferences for more value in the near-term, these preferences translate into significant misvaluations. This finding supports the concerns that many managers have about the adverse effects of an ownership base dominated by short-term-focused institutional investors.

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TABLE 1

Portfolio Characteristics of Institutional Investor Groups

Panel A: Characteristics of Transient, Dedicated, and Quasi-indexer Institutions

		Institutional Investor Groups[1]		
Factor		TRA	DED	QIX
PTURN	Mean[2]	1.472	-0.228	-0.442
	Standard Dev.	0.819	0.691	0.488
BLOCK	Mean	-0.196	2.122	-0.292
	Standard Dev.	0.428	1.349	0.361
FSIZE	Mean	-0.248	-0.739	0.243
	Standard Dev.	0.894	1.104	0.858
ISIZE	Mean	0.192	0.289	-0.102
	Standard Dev.	0.906	0.961	0.930
N		3454	1785	10,696

where PTURN = Portfolio Turnover Factor. Combination of 1) level of portfolio turnover and 2) percent of portfolio stocks held continuously for two years

BLOCK = Block Size Factor. Combination of 1) weighted average size of institutional holdings in portfolio firms, 2) percent of portfolio held in large blocks (greater than 5% stakes), and 3) portfolio concentration ratio (total equity / number of stocks)

FSIZE = Firm Size Preference Factor. Combination of 1) weighted average market value of equity of firms held by institution, 2) weighted average time listed of firm in portfolio, 3) percent of portfolio firms in S&P 500

ISIZE = Institutional Size Factor. Combination of 1) total equity holdings of institution and 2) number of stocks in institutions' portfolio

N = Number of institution-years in group

Panel B: Interaction between Institutional Investor Type and Investment Horizon

	Banks	Insurance Companies	Investment Advisers	Pensions & Endowments	Total
Dedicated	537	139	940	168	1,784
Quasi-indexer	2,863	748	5,855	1,224	10,690
Transient	300	268	2,620	265	3,453
Total	3,700	1,155	9,415	1,657	15,927

[1] TRA = transient institutional investors, DED = dedicated institutional investors, and QIX = quasi-indexer institutional investors. Institutions are classified into these groups using the factor and cluster analysis approach described in Bushee (1998). First, prior research is used to calculate a number of variables that have been used to describe institutional investor trading behavior. Then, principal factor analysis is used to combine these variables into common factors that explain the shared variance among the original variables. Finally, a k-means cluster analysis is run on the factor scores from PTURN and BLOCK to obtain the final separation of institutional investors into groups (the ISIZE and FSIZE factors are not used in the cluster analysis but are reported for descriptive purposes.

[2] The numbers in the columns are factor scores for each of the listed factors. These scores are standardized to have a mean of zero and a standard deviation of one across the whole distribution of institutional investors.

TABLE 2

Descriptive Statistics

Variable	Mean	Median	Std. Dev.	25th Pctl.	75th Pctl.
BVC	0.725	0.592	0.544	0.367	0.920
AXC	-0.092	-0.012	0.299	-0.169	0.076
TVC	0.488	0.464	0.328	0.275	0.688
SIZE	6.100	6.006	1.583	4.939	7.175
LEV	0.239	0.227	0.159	0.123	0.331
SP500	0.355	0.000	0.479	0.000	1.000
MAR	0.003	-0.002	0.114	-0.038	0.021
BTA	1.202	1.164	0.496	0.877	1.475
STD	0.102	0.100	0.026	0.080	0.125
LIQ	0.031	0.024	0.024	0.016	0.037
YIELD	0.025	0.022	0.022	0.006	0.036
R&D	0.019	0.003	0.033	0.000	0.025
TIME	18.070	19.143	7.597	12.622	23.705
RATE	4.080	5.000	3.183	0.000	7.000
SGR	0.027	0.050	0.209	-0.059	0.129
TIH	0.358	0.381	0.230	0.174	0.540
BNK	0.080	0.058	0.081	0.015	0.118
INS	0.037	0.011	0.065	0.001	0.044
IA	0.096	0.028	0.134	0.002	0.143
P&E	0.124	0.068	0.141	0.002	0.210
DED	0.077	0.054	0.083	0.011	0.113
QIX	0.203	0.201	0.145	0.081	0.311
TRA	0.072	0.053	0.074	0.013	0.106

BVC = Book value per share (60/25) / Price (24)[1]

AXC = Present value of forecasted abnormal earnings over next four years/ Price

TVC = Present value of terminal value four-years ahead / Price

SIZE = Log of market value of equity (24*25)

LEV = Leverage, measured as debt-to-assets ((9+34)/6)

SP500 = 1 if firm listed on S&P 500, 0 otherwise

MAR = Market-adjusted returns over prior year

BTA = Market model beta estimated from up to 36 prior monthly returns

STD = Standard deviation of daily returns over prior year

LIQ = Liquidity, measured as average monthly volume divided by shares outstanding over prior year

YIELD = Dividend yield (21/24)

R&D = R&D intensity (46/12)

TIME = Time listed, in years

RATE = S&P common stock rating (9 = A+…0 = not rated)

SGR = Average sales growth over prior three years (12).

TIH = Total shares held by institutional investors divided by total shares outstanding

BNK/INS/IA/PNE = Percent of shares held by Banks / Insurance Companies / Investment Advisers / Pensions & Endowments

DED/QIX/TRA = Percent of shares held by Dedicated / Quasi-indexer / Transient institutions

[1] Compustat numbers are in parentheses.

TABLE 3

Correlation Matrix[1]

	BVC	AXC	TVC	SIZE	LEV	SP500	MAR	BTA	STD	LIQ	YIELD	R&D
BVC[2]	1	-0.78	-0.20	-0.35	0.04	-0.06	-0.19	-0.02	0.06	-0.09	-0.04	-0.04
AXC	-0.77	1	0.33	0.31	-0.07	0.05	0.14	-0.06	-0.12	0.07	0.04	0.01
TVC	-0.45	0.51	1	0.02	0.06	-0.06	0.05	0.09	0.16	0.17	0.00	0.09
SIZE	-0.42	0.38	0.10	1	-0.12	0.63	0.17	-0.11	-0.41	0.02	0.02	0.02
LEV	0.15	-0.12	-0.04	-0.12	1	-0.03	-0.09	0.05	0.18	0.01	0.11	-0.08
SP500	-0.06	0.08	-0.05	0.64	-0.02	1	-0.01	-0.09	-0.29	-0.01	0.05	0.00
MAR	-0.41	0.41	0.11	0.26	-0.15	0.06	1	0.08	0.03	0.20	-0.01	0.02
BTA	-0.04	-0.09	0.12	-0.08	0.05	-0.08	0.02	1	0.59	0.37	-0.03	0.14
STD	0.07	-0.18	0.12	-0.44	0.17	-0.31	-0.10	0.62	1	0.47	-0.05	0.10
LIQ	-0.12	0.08	0.16	0.06	0.09	0.08	0.00	0.37	0.45	1	-0.02	0.21
YIELD	0.26	-0.12	-0.27	0.19	-0.06	0.25	-0.03	-0.31	-0.50	-0.35	1	-0.02
R&D	-0.06	0.01	0.09	0.13	-0.20	0.14	0.00	0.08	0.00	0.16	-0.03	1
TIME	0.03	0.05	-0.18	0.32	0.05	0.42	-0.04	-0.18	-0.32	-0.08	0.27	0.09
RATE	-0.20	0.25	0.02	0.51	-0.13	0.44	0.06	-0.19	-0.45	-0.11	0.24	0.10
SGR	-0.21	0.21	0.13	0.19	-0.02	0.04	0.12	0.06	-0.01	0.13	-0.11	0.00
TIH	-0.20	0.22	0.06	0.37	-0.12	0.25	0.06	0.02	-0.21	0.19	0.07	0.17
BNK	0.13	-0.12	-0.10	-0.19	-0.05	-0.12	-0.06	0.02	0.03	0.00	0.08	0.02
INS	-0.35	0.31	0.18	0.19	-0.10	-0.03	0.11	0.11	0.05	0.22	-0.19	0.09
IA	-0.27	0.30	0.09	0.20	-0.05	0.07	-0.02	0.01	-0.12	0.13	-0.10	0.09
PNE	-0.06	0.06	0.00	0.40	-0.14	0.35	0.03	-0.04	-0.24	0.04	0.23	0.16
DED	-0.06	0.10	0.01	0.12	-0.04	0.07	-0.10	-0.02	-0.10	0.07	0.02	0.08
QIX	-0.19	0.22	0.07	0.41	-0.17	0.30	0.07	-0.04	-0.29	0.08	0.16	0.17
TRA	-0.25	0.19	0.05	0.28	-0.09	0.16	0.17	0.11	-0.04	0.30	-0.05	0.16

TABLE 3 (Continued)
Correlation Matrix

	TIME	RATE	SGR	TIH	BNK	INS	IA	PNE	DED	QIX	TRA
BVC	-0.01	-0.17	-0.13	-0.19	0.06	-0.21	-0.21	-0.05	-0.02	-0.18	-0.20
AXC	0.03	0.17	0.13	0.19	-0.03	0.16	0.20	0.06	0.06	0.19	0.15
TVC	-0.16	-0.05	0.04	-0.01	-0.07	0.09	0.05	-0.06	-0.02	0.00	0.00
SIZE	0.30	0.49	0.17	0.35	-0.21	0.09	0.34	0.36	0.05	0.40	0.22
LEV	0.01	-0.12	0.02	-0.12	-0.02	-0.03	-0.03	-0.12	0.01	-0.16	-0.06
SP500	0.40	0.43	0.04	0.23	-0.14	-0.10	0.18	0.38	0.03	0.30	0.10
MAR	-0.09	-0.02	0.08	0.09	-0.08	0.33	0.08	-0.05	-0.03	0.05	0.21
BTA	-0.21	-0.19	0.03	0.01	0.02	0.17	0.00	-0.07	-0.01	-0.04	0.15
STD	-0.31	-0.40	-0.01	-0.20	0.01	0.17	-0.17	-0.25	-0.07	-0.29	0.03
LIQ	-0.23	-0.14	0.16	0.15	-0.03	0.37	0.14	-0.03	0.05	0.05	0.31
YIELD	0.06	0.01	-0.02	0.01	0.02	-0.03	-0.03	0.03	0.02	0.02	-0.03
R&D	-0.06	-0.02	-0.01	0.04	-0.03	0.09	0.04	0.01	0.02	0.02	0.07
TIME	1	0.44	0.05	0.21	-0.01	-0.10	0.25	0.18	0.11	0.26	0.02
RATE	0.40	1	0.15	0.30	-0.09	-0.01	0.27	0.32	0.11	0.36	0.07
SGR	0.04	0.19	1	0.11	-0.10	0.12	0.11	0.08	0.03	0.10	0.12
TIH	0.24	0.29	0.12	1	0.42	0.46	0.58	0.57	0.62	0.87	0.63
BNK	-0.01	-0.07	-0.08	0.49	1	0.03	-0.12	0.20	0.44	0.26	0.29
INS	0.03	0.10	0.15	0.64	0.33	1	0.37	-0.07	0.33	0.27	0.47
IA	0.22	0.22	0.14	0.67	0.18	0.64	1	-0.07	0.34	0.56	0.32
PNE	0.20	0.34	0.12	0.67	0.42	0.33	0.27	1	0.27	0.58	0.30
DED	0.15	0.15	0.05	0.73	0.53	0.54	0.56	0.48	1	0.32	0.17
QIX	0.27	0.36	0.12	0.88	0.41	0.55	0.62	0.69	0.52	1	0.39
TRA	0.10	0.12	0.13	0.73	0.48	0.60	0.52	0.53	0.44	0.58	1

[1] Pearson correlations are above the diagonal. Spearman correlations are below the diagonal.
[2] See table 1 for variable definitions.

TABLE 4

Regression of Institutional Ownership on Decomposition of Firm Value and Control Variables

$$PIH_t = \gamma_0 + \gamma_1 BVC_t + \gamma_2 AXC_t + \gamma_3 TVC_t + \gamma_4 SIZE_t + \gamma_5 LEV_t + \gamma_6 SP500_t + \gamma_7 MAR_t + \gamma_8 BETA_t + \gamma_9 STD_t + \gamma_{10} LIQ_t + \gamma_{11} YIELD_t + \gamma_{12} R\&D_t + \gamma_{13} TIME_t + \gamma_{14} RATE_t + \gamma_{15} SGR_t + \varepsilon_t$$ [1]

Panel A: Terminal value forecasted four-years ahead

	Institutional Ownership Variables[2]							
	TIH	DED	QIX	TRA	BNK	IA	INS	P&E
INT[3]	0.353	0.122	0.215	0.013	0.152	0.074	0.044	0.020
	(0.000)	(0.001)	(0.012)	(0.045)	(0.000)	(0.328)	(0.001)	(0.278)
BVC	-0.030	-0.001	-0.018	-0.009	0.005	-0.021	-0.021	0.009
	(0.047)	(0.426)	(0.104)	(0.000)	(0.110)	(0.065)	(0.001)	(0.138)
AXC	0.029	0.007	0.011	0.012	0.026	-0.014	-0.011	0.022
	(0.181)	(0.332)	(0.174)	(0.022)	(0.000)	(0.017)	(0.004)	(0.231)
TVC	-0.031	-0.013	-0.001	-0.017	-0.021	-0.002	-0.005	0.004
	(0.113)	(0.021)	(0.466)	(0.032)	(0.011)	(0.254)	(0.407)	(0.277)
SIZE	0.009	-0.004	0.006	0.006	-0.010	0.005	0.000	0.017
	(0.162)	(0.239)	(0.061)	(0.000)	(0.083)	(0.166)	(0.499)	(0.059)
LEV	-0.096	-0.002	-0.090	-0.004	-0.012	-0.014	-0.006	-0.042
	(0.000)	(0.437)	(0.000)	(0.208)	(0.115)	(0.148)	(0.053)	(0.001)
SP500	0.024	0.002	0.027	-0.003	-0.013	0.017	-0.012	0.039
	(0.004)	(0.231)	(0.002)	(0.054)	(0.000)	(0.245)	(0.126)	(0.000)
MAR	-0.005	-0.035	-0.151	0.174	-0.031	0.039	0.123	-0.173
	(0.480)	(0.029)	(0.095)	(0.033)	(0.265)	(0.040)	(0.004)	(0.004)
BETA	0.073	0.010	0.047	0.017	0.015	0.016	0.007	0.034
	(0.005)	(0.015)	(0.002)	(0.077)	(0.000)	(0.013)	(0.109)	(0.016)
STD	-2.065	-0.406	-1.498	-0.161	-0.398	-0.557	-0.022	-1.000
	(0.000)	(0.000)	(0.000)	(0.169)	(0.008)	(0.285)	(0.422)	(0.000)
LIQ	1.221	0.009	0.366	0.840	0.353	0.235	0.332	0.281
	(0.004)	(0.473)	(0.174)	(0.000)	(0.047)	(0.158)	(0.138)	(0.087)
YIELD	0.341	0.132	0.342	-0.105	0.111	-0.164	-0.177	0.527
	(0.010)	(0.008)	(0.010)	(0.000)	(0.118)	(0.019)	(0.001)	(0.047)
R&D	0.715	0.131	0.349	0.218	0.097	0.141	0.116	0.396
	(0.001)	(0.000)	(0.004)	(0.000)	(0.177)	(0.001)	(0.000)	(0.014)
TIME	0.003	0.001	0.001	0.001	0.001	0.000	0.000	0.001
	(0.001)	(0.026)	(0.000)	(0.009)	(0.017)	(0.128)	(0.482)	(0.002)
RATE	0.002	-0.002	0.005	-0.001	-0.002	0.003	-0.001	0.002
	(0.001)	(0.135)	(0.004)	(0.006)	(0.000)	(0.192)	(0.209)	(0.040)
SGR	-0.014	-0.009	-0.004	0.000	-0.011	-0.002	0.005	0.000
	(0.038)	(0.001)	(0.326)	(0.431)	(0.008)	(0.239)	(0.118)	(0.467)
Avg. Adj. R^2	0.20	0.05	0.26	0.21	0.13	0.19	0.19	0.30

TABLE 4 (Continued)

Regression of Institutional Ownership on Decomposition of Firm Value and Control Variables

Panel B: Terminal value forecasted one-year ahead

	TIH	DED	QIX	TRA	BNK	IA	INS	P&E
INT	0.352	0.123	0.214	0.012	0.152	0.073	0.043	0.020
	(0.000)	(0.001)	(0.010)	(0.056)	(0.000)	(0.285)	(0.001)	(0.275)
BVC	-0.027	-0.001	-0.014	-0.010	0.005	-0.020	-0.019	0.011
	(0.049)	(0.391)	(0.146)	(0.000)	(0.107)	(0.065)	(0.001)	(0.093)
AXC1	0.100	0.021	0.046	0.034	0.068	-0.021	-0.007	0.044
	(0.083)	(0.237)	(0.074)	(0.010)	(0.001)	(0.066)	(0.408)	(0.237)
TVC1	-0.022	-0.010	0.000	-0.011	-0.013	-0.004	-0.006	0.007
	(0.094)	(0.009)	(0.483)	(0.054)	(0.012)	(0.100)	(0.377)	(0.033)
SIZE	0.009	-0.004	0.006	0.006	-0.010	0.005	0.000	0.017
	(0.182)	(0.237)	(0.068)	(0.000)	(0.080)	(0.162)	(0.483)	(0.062)
LEV	-0.094	-0.002	-0.088	-0.004	-0.010	-0.015	-0.006	-0.041
	(0.000)	(0.450)	(0.000)	(0.255)	(0.157)	(0.127)	(0.064)	(0.001)
SP500	0.025	0.002	0.027	-0.003	-0.012	0.017	-0.012	0.040
	(0.005)	(0.201)	(0.002)	(0.061)	(0.000)	(0.246)	(0.114)	(0.000)
MAR	-0.007	-0.033	-0.156	0.177	-0.029	0.036	0.121	-0.175
	(0.472)	(0.022)	(0.092)	(0.031)	(0.281)	(0.045)	(0.005)	(0.003)
BETA	0.071	0.009	0.046	0.017	0.014	0.017	0.007	0.033
	(0.004)	(0.014)	(0.002)	(0.081)	(0.000)	(0.014)	(0.105)	(0.015)
STD	-2.068	-0.411	-1.489	-0.169	-0.404	-0.553	-0.018	-1.001
	(0.000)	(0.000)	(0.000)	(0.157)	(0.008)	(0.273)	(0.432)	(0.000)
LIQ	1.233	0.014	0.367	0.845	0.359	0.233	0.334	0.284
	(0.004)	(0.459)	(0.182)	(0.000)	(0.040)	(0.166)	(0.156)	(0.091)
YIELD	0.345	0.136	0.333	-0.096	0.123	-0.170	-0.182	0.522
	(0.010)	(0.007)	(0.012)	(0.000)	(0.097)	(0.018)	(0.001)	(0.050)
R&D	0.718	0.130	0.356	0.214	0.094	0.142	0.118	0.400
	(0.001)	(0.000)	(0.004)	(0.000)	(0.182)	(0.001)	(0.000)	(0.017)
TIME	0.003	0.001	0.001	0.001	0.001	0.000	0.000	0.001
	(0.001)	(0.022)	(0.000)	(0.009)	(0.017)	(0.132)	(0.495)	(0.002)
RATE	0.002	-0.002	0.005	-0.001	-0.002	0.003	-0.001	0.003
	(0.002)	(0.135)	(0.003)	(0.006)	(0.000)	(0.183)	(0.234)	(0.038)
SGR	-0.014	-0.009	-0.004	-0.001	-0.011	-0.002	0.006	0.000
	(0.041)	(0.001)	(0.327)	(0.401)	(0.007)	(0.252)	(0.103)	(0.465)
Avg. Adj. R^2	0.20	0.05	0.26	0.21	0.14	0.19	0.19	0.30

[1] Regressions are run yearly and mean coefficients are reported. The p-values in parentheses are based on a standard error derived from the distribution of these coefficients, adjusted for serial correlation.

[2] The PIH variable is replaced in the regression by the other variables indicated in the top row, where TIH = total institutional ownership, DED = dedicated, QIX = quasi-indexer, TRA = transient, BNK= banks, IA = investment advisers, INS = insurance companies, and P&E = pensions and endowments

[3] See table 1 for variable definitions. AXC1 (TVC1) is the near-term earnings (terminal value) computed with the horizon set at one-year ahead.

TABLE 5

Regression of Three-Year Changes in Institutional Ownership on Three-Year Changes in the Decomposition of Firm Value and in Control Variables

$$CPIH_t = \gamma_0 + \gamma_1 CBVC_t + \gamma_2 CAXC_t + \gamma_3 CTVC_t + \gamma_4 CSIZE_t + \gamma_5 CLEV_t + \gamma_6 CSP500_t + \gamma_7 CMAR_t + \gamma_8 CBETA_t + \gamma_9 CSTD_t + \gamma_{10} CLIQ_t + \gamma_{11} CYIELD_t + \gamma_{12} CR\&D_t + \gamma_{13} TIME_{t-3} + \gamma_{14} CRATE_t + \gamma_{15} CSGR_t + \varepsilon_t$$ [1]

Panel A: Terminal value forecasted four-years ahead

	Institutional Ownership Variables[2]							
	CTIH	CDED	CQIX	CTRA	CBNK	CIA	CINS	CP&E
INT[3]	0.060	0.015	0.039	0.007	0.000	0.041	0.018	0.001
	(0.000)	(0.005)	(0.000)	(0.102)	(0.488)	(0.046)	(0.009)	(0.472)
CBVC	0.002	0.000	0.003	0.001	0.003	-0.002	-0.003	0.006
	(0.313)	(0.495)	(0.067)	(0.231)	(0.095)	(0.264)	(0.150)	(0.109)
CAXC	0.021	0.003	0.003	0.017	0.022	-0.019	-0.003	0.017
	(0.129)	(0.230)	(0.359)	(0.050)	(0.013)	(0.053)	(0.122)	(0.139)
CTVC	-0.002	0.000	0.010	-0.010	-0.004	-0.005	-0.001	0.014
	(0.382)	(0.492)	(0.003)	(0.043)	(0.117)	(0.153)	(0.222)	(0.011)
CSIZE	0.038	-0.005	0.016	0.021	-0.006	0.024	0.018	-0.001
	(0.000)	(0.245)	(0.004)	(0.000)	(0.189)	(0.008)	(0.012)	(0.428)
CLEV	-0.020	0.008	-0.033	0.006	0.006	0.033	0.015	-0.059
	(0.129)	(0.254)	(0.004)	(0.257)	(0.224)	(0.119)	(0.003)	(0.000)
CSP500	-0.014	-0.004	0.008	-0.015	-0.023	0.021	-0.015	0.010
	(0.005)	(0.356)	(0.059)	(0.022)	(0.047)	(0.087)	(0.001)	(0.380)
CMAR	-0.038	-0.075	-0.070	0.112	-0.044	0.033	0.061	-0.099
	(0.154)	(0.043)	(0.030)	(0.006)	(0.013)	(0.189)	(0.001)	(0.026)
CBETA	0.008	0.005	0.002	0.003	-0.001	0.011	-0.001	0.002
	(0.037)	(0.028)	(0.142)	(0.327)	(0.407)	(0.002)	(0.245)	(0.316)
CSTD	-0.526	-0.246	-0.364	0.026	-0.130	-0.195	0.053	-0.302
	(0.000)	(0.001)	(0.001)	(0.395)	(0.081)	(0.190)	(0.060)	(0.007)
CLIQ	0.476	0.076	0.171	0.212	0.002	0.088	-0.031	0.397
	(0.010)	(0.253)	(0.315)	(0.233)	(0.495)	(0.248)	(0.407)	(0.006)
CYIELD	-0.017	0.051	0.035	-0.109	-0.114	-0.110	0.080	0.220
	(0.472)	(0.319)	(0.264)	(0.135)	(0.323)	(0.194)	(0.033)	(0.008)
CR&D	-0.516	-0.254	-0.311	0.015	-0.265	0.068	-0.109	-0.182
	(0.113)	(0.219)	(0.037)	(0.441)	(0.226)	(0.401)	(0.169)	(0.161)
TIME	0.000	0.000	0.000	0.000	0.000	0.002	0.000	-0.001
	(0.262)	(0.052)	(0.304)	(0.325)	(0.028)	(0.078)	(0.004)	(0.254)
CRATE	0.001	0.001	0.001	-0.001	0.001	-0.001	-0.001	0.002
	(0.353)	(0.138)	(0.338)	(0.094)	(0.277)	(0.256)	(0.214)	(0.194)
CSGR	0.030	0.008	0.016	0.003	0.014	0.014	-0.002	0.000
	(0.014)	(0.278)	(0.035)	(0.428)	(0.017)	(0.027)	(0.402)	(0.495)
Avg. Adj. R^2	0.06	0.03	0.04	0.13	0.05	0.13	0.10	0.09

TABLE 5 (continued)

Regression of Three-Year Changes in Institutional Ownership on Three-Year Changes in the Decomposition of Firm Value and in Control Variables

Panel B: Terminal value forecasted one-year ahead

	CTIH	CDED	CQIX	CTRA	CBNK	CIA	CINS	CP&E
INT	0.059	0.015	0.039	0.007	0.000	0.041	0.018	0.002
	(0.000)	(0.006)	(0.000)	(0.115)	(0.489)	(0.045)	(0.010)	(0.468)
CBVC	0.005	0.000	0.006	0.000	0.003	-0.001	-0.003	0.008
	(0.100)	(0.476)	(0.006)	(0.408)	(0.118)	(0.393)	(0.165)	(0.082)
CAXC1	0.058	0.006	0.032	0.023	0.045	-0.024	-0.003	0.037
	(0.022)	(0.324)	(0.049)	(0.019)	(0.032)	(0.085)	(0.325)	(0.054)
CTVC1	0.001	0.000	0.006	-0.005	-0.001	-0.007	-0.002	0.013
	(0.452)	(0.458)	(0.058)	(0.276)	(0.346)	(0.064)	(0.300)	(0.015)
CSIZE	0.037	-0.005	0.014	0.022	-0.006	0.024	0.018	-0.003
	(0.000)	(0.247)	(0.007)	(0.000)	(0.166)	(0.009)	(0.023)	(0.311)
CLEV	-0.017	0.009	-0.031	0.006	0.008	0.033	0.014	-0.057
	(0.169)	(0.244)	(0.004)	(0.250)	(0.175)	(0.148)	(0.003)	(0.000)
CSP500	-0.014	-0.004	0.008	-0.014	-0.023	0.021	-0.015	0.010
	(0.005)	(0.361)	(0.056)	(0.022)	(0.045)	(0.091)	(0.001)	(0.380)
CMAR	-0.025	-0.072	-0.063	0.115	-0.036	0.033	0.061	-0.093
	(0.211)	(0.043)	(0.028)	(0.005)	(0.028)	(0.180)	(0.001)	(0.047)
CBETA	0.008	0.005	0.003	0.002	-0.001	0.011	-0.001	0.003
	(0.023)	(0.025)	(0.068)	(0.369)	(0.380)	(0.002)	(0.237)	(0.296)
CSTD	-0.530	-0.247	-0.375	0.031	-0.132	-0.194	0.052	-0.310
	(0.000)	(0.001)	(0.000)	(0.366)	(0.067)	(0.184)	(0.065)	(0.006)
CLIQ	0.476	0.075	0.164	0.218	0.007	0.078	-0.029	0.391
	(0.009)	(0.256)	(0.327)	(0.230)	(0.481)	(0.265)	(0.411)	(0.007)
CYIELD	-0.009	0.053	0.039	-0.105	-0.107	-0.114	0.084	0.226
	(0.484)	(0.310)	(0.244)	(0.142)	(0.332)	(0.182)	(0.027)	(0.007)
CR&D	-0.506	-0.252	-0.292	0.005	-0.259	0.082	-0.112	-0.184
	(0.114)	(0.214)	(0.040)	(0.479)	(0.238)	(0.379)	(0.164)	(0.160)
TIME	0.000	0.000	0.000	0.000	0.000	0.002	0.000	-0.001
	(0.294)	(0.043)	(0.310)	(0.344)	(0.049)	(0.080)	(0.003)	(0.257)
CRATE	0.001	0.001	0.001	-0.001	0.001	-0.001	-0.001	0.002
	(0.323)	(0.141)	(0.302)	(0.097)	(0.246)	(0.277)	(0.218)	(0.189)
CSGR	0.028	0.009	0.013	0.003	0.013	0.013	-0.002	-0.002
	(0.015)	(0.266)	(0.078)	(0.399)	(0.023)	(0.010)	(0.415)	(0.429)
Avg. Adj. R^2	0.06	0.03	0.04	0.13	0.05	0.13	0.10	0.09

[1] Regressions are run yearly and mean coefficients are reported. The p-values in parentheses are based on a standard error derived from the distribution of these coefficients, adjusted for serial correlation.

[2] The CPIH variable is a three-year change in holdings. The PIH variable is replaced in the regression by the other variables indicated in the top row, where TIH = total institutional ownership, DED = dedicated, QIX = quasi-indexer, TRA = transient, BNK= banks, IA = investment advisers, INS = insurance companies, and P&E = pensions and endowments

[3] Variables are three-year changes in the variables defined in table 1. AXC1 (TVC1) is the near-term earnings (terminal value) computed with the horizon set at one-year ahead.

TABLE 6

Regression of Price on the Decomposition of Firm Value Interacted with Indicators for High Levels of Institutional Ownership

$$P_t = \alpha_0 + \alpha_1 DPIH_t + \alpha_2 BV_t + \alpha_3 (BV * DPIH)_t + \alpha_4 PVAX_t + \alpha_5 (PVAX * DPIH)_t + \alpha_6 PVTV_t + \alpha_7 (PVTV * DPIH)_t + \eta_{jt} 1$$

Panel A: Regression without Institutional Ownership Interactions

Horizon	INT	BV	PXAX	PVTV
4 year ahead	3.766	0.988	1.206	0.684
p-value (=0)[2]	(0.002)	(0.000)	(0.000)	(0.000)
p-value (=1)		(0.462)	(0.032)	(0.000)
1 year ahead	4.073	1.014	2.571	0.673
p-value (=0)	(0.002)	(0.000)	(0.000)	(0.000)
p-value (=1)		(0.455)	(0.003)	(0.000)

Panel B: Regression with Interactions of Institutional Ownership classified by Investment Horizon

Horizon	INT	DTRA	DQIX	DDED	BV	BV* DTRA	BV* DQIX	BV* DDED
4 year ahead	3.676	7.205	1.995	-1.941	0.988	-0.217	0.089	0.003
p-value (=0)	(0.000)	(0.001)	(0.004)	(0.091)	(0.000)	(0.076)	(0.014)	(0.487)
p-value (=1)					(0.461)	(0.104)	(0.135)	(0.451)
1 year ahead	4.017	6.950	1.646	-2.048	0.996	-0.199	0.109	0.065
p-value (=0)	(0.000)	(0.002)	(0.014)	(0.069)	(0.000)	(0.098)	(0.010)	(0.235)
p-value (=1)					(0.484)	(0.136)	(0.070)	(0.240)

Horizon	PVAX	PVAX* DTRA	PVAX* DQIX	PVAX* DDED	PVTV	PVTV* DTRA	PVTV* DQIX	PVTV* DDED
4 year ahead	1.182	0.394	0.311	-0.093	0.654	-0.134	-0.036	0.116
p-value (=0)	(0.000)	(0.086)	(0.019)	(0.396)	(0.000)	(0.032)	(0.228)	(0.180)
p-value (=1)	(0.129)	(0.024)	(0.004)	(0.293)	(0.000)	(0.000)	(0.000)	(0.079)
1 year ahead	2.383	1.936	1.057	0.015	0.655	-0.119	-0.023	0.058
p-value (=0)	(0.000)	(0.006)	(0.028)	(0.492)	(0.000)	(0.036)	(0.310)	(0.210)
p-value (=1)	(0.004)	(0.006)	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.012)

TABLE 6 (Continued)

Regression of Price on the Decomposition of Firm Value Interacted with Indicators for High Levels of Institutional Ownership

Panel C: Regression with Interactions of Institutional Ownership classified by Fiduciary Standards

Horizon	INT	DBNK	DIIA	DINS	DPNE	BV	BV* DBNK	BV* DIA	BV* DINS	BV* DP&E
4 year ahead	4.740	1.519	0.507	0.576	1.436	0.983	-0.115	0.027	-0.088	0.004
p-value (=0)	(0.000)	(0.227)	(0.354)	(0.380)	(0.229)	(0.000)	(0.216)	(0.424)	(0.055)	(0.472)
p-value (=1)						(0.458)	(0.143)	(0.480)	(0.239)	(0.418)
1 year ahead	4.943	1.452	0.475	0.724	1.114	0.980	-0.112	0.206	-0.064	0.043
p-value (=0)	(0.000)	(0.268)	(0.405)	(0.375)	(0.274)	(0.000)	(0.214)	(0.130)	(0.168)	(0.211)
p-value (=1)						(0.436)	(0.165)	(0.195)	(0.306)	(0.412)

Horizon	PVAX	PVAX* DBNK	PVAX* DIA	PVAX* DINS	PVAX* DP&E	PVTV	PVTV* DBNK	PVTV* DIA	PVTV* DINS	PVTV* DP&E
4 year ahead	1.310	-0.038	-0.180	-0.149	-0.229	0.563	-0.083	0.212	0.141	0.005
p-value (=0)	(0.000)	(0.428)	(0.223)	(0.217)	(0.196)	(0.000)	(0.233)	(0.037)	(0.019)	(0.469)
p-value (=1)	(0.035)	(0.040)	(0.305)	(0.358)	(0.293)	(0.000)	(0.003)	(0.021)	(0.008)	(0.000)
1 year ahead	2.632	0.036	1.913	-0.152	-0.254	0.594	-0.084	0.031	0.105	-0.042
p-value (=0)	(0.000)	(0.468)	(0.007)	(0.365)	(0.408)	(0.000)	(0.273)	(0.319)	(0.020)	(0.323)
p-value (=1)	(0.009)	(0.001)	(0.001)	(0.067)	(0.006)	(0.000)	(0.002)	(0.000)	(0.013)	(0.000)

[1] See table 1 for variable definitions. BV, PVAX, and PVTV are the undeflated values of BVC, AXC, and TVC, respectively. DPIH equals one if institutional ownership is in the top quintile, zero otherwise. The PIH variable is replaced by the other variables indicated in the top row, where DED = dedicated, QIX = quasi-indexer, TRA = transient, BNK= banks, IA = investment advisers, INS = insurance companies, and P&E = pensions and endowments.

[2] Regressions are run yearly and mean coefficients are reported. The p-values in parentheses are based on a standard error derived from the distribution of these coefficients, adjusted for serial correlation. "P-value (=0)" represents the p-value that tests whether the mean coefficient is significantly different from zero. "P-value (=1)" represents the p-value that tests whether the mean coefficient is significantly different from one; for interaction variables, this test is whether the sum of the interacted and uninteracted coefficients is different from one.

TABLE 7

Regression of Future Size-Adjusted Returns on Ranked Values of Firm Value Components interacted with Institutional Ownership

$$CAR(I)_t = \beta_0 + \beta_1 RBVC_t + \beta_2 (RBVC * RPIH)_t + \beta_3 RAXC_t + \beta_4 (RAXC * RPIH)_t + \beta_5 RTVC_t + \beta_6 (RTVC * RPIH)_t + 1$$
$$\beta_7 RSIZE_t + \beta_8 RBETA_t + \beta_9 REP_t + \xi_{jt}$$

Panel A: Regression without Institutional Ownership Interactions

	Four-year Horizon			One-year Horizon		
	RBVC	RAXC	RTVC	RBVC1	RAXC1	RTVC1
CAR1	0.022	0.043	-0.036	0.095	0.107	-0.021
	(0.190)	(0.129)	(0.156)	(0.003)	(0.026)	(0.246)
CAR2	0.047	0.076	-0.083	0.227	0.215	-0.036
	(0.178)	(0.034)	(0.072)	(0.002)	(0.006)	(0.230)
CAR3	0.048	0.083	-0.155	0.317	0.301	-0.103
	(0.279)	(0.085)	(0.024)	(0.003)	(0.005)	(0.039)
CAR4	0.149	0.128	-0.193	0.504	0.435	-0.114
	(0.069)	(0.047)	(0.026)	(0.003)	(0.002)	(0.045)
CAR5	0.282	0.155	-0.208	0.653	0.489	-0.111
	(0.015)	(0.063)	(0.018)	(0.002)	(0.000)	(0.072)

TABLE 7 (Continued)

Regression of Future Size-Adjusted Returns on Ranked Values of Firm Value Components interacted with Institutional Ownership

Panel B: Regression with Interactions of Institutional Ownership classified by Investment Horizon

Four-year Horizon

	RBVC	RBVC* RTRA	RBVC* RQIX	RBVC* RDED	RAXC	RAXC* RTRA	RAXC* RQIX	RAXC* RDED	RTVC	RTVC* RTRA	RTVC* RQIX	RTVC* RDED
CAR1	-0.024	0.133	0.001	-0.005	0.044	-0.053	-0.053	0.107	-0.065	0.068	0.080	-0.078
	(0.214)	(0.071)	(0.492)	(0.447)	(0.171)	(0.190)	(0.295)	(0.105)	(0.191)	(0.229)	(0.166)	(0.210)
CAR2	-0.007	0.103	0.117	-0.018	0.130	-0.145	-0.090	0.150	-0.203	0.225	0.110	-0.069
	(0.463)	(0.115)	(0.009)	(0.329)	(0.010)	(0.033)	(0.319)	(0.031)	(0.016)	(0.036)	(0.150)	(0.186)
CAR3	-0.063	0.090	0.212	0.057	0.167	-0.130	-0.214	0.208	-0.320	0.260	0.281	-0.163
	(0.282)	(0.209)	(0.008)	(0.201)	(0.020)	(0.238)	(0.265)	(0.035)	(0.021)	(0.031)	(0.057)	(0.055)
CAR4	-0.032	0.138	0.365	0.057	0.227	-0.125	-0.159	0.152	-0.371	0.247	0.259	-0.089
	(0.431)	(0.147)	(0.010)	(0.250)	(0.023)	(0.357)	(0.350)	(0.155)	(0.006)	(0.181)	(0.134)	(0.226)
CAR5	-0.016	0.282	0.489	0.080	0.271	-0.145	-0.280	0.289	-0.390	0.235	0.389	-0.196
	(0.477)	(0.077)	(0.061)	(0.180)	(0.035)	(0.368)	(0.317)	(0.122)	(0.006)	(0.256)	(0.177)	(0.242)

One-year Horizon

	RBVC1	RBVC1* RTRA	RBVC1* RQIX	RBVC1* RDED	RAXC1	RAXC1* RTRA	RAXC1* RQIX	RAXC1* RDED	RTVC1	RTVC1* RTRA	RTVC1* RQIX	RTVC1* RDED
CAR1	0.044	0.127	-0.017	-0.006	0.112	-0.041	-0.078	0.096	-0.072	0.064	0.110	-0.061
	(0.036)	(0.074)	(0.325)	(0.413)	(0.038)	(0.249)	(0.220)	(0.114)	(0.163)	(0.199)	(0.070)	(0.247)
CAR2	0.156	0.100	0.095	-0.025	0.243	-0.132	-0.081	0.153	-0.160	0.217	0.104	-0.054
	(0.018)	(0.138)	(0.020)	(0.286)	(0.025)	(0.048)	(0.336)	(0.016)	(0.019)	(0.052)	(0.138)	(0.282)
CAR3	0.201	0.075	0.186	0.015	0.323	-0.128	-0.121	0.211	-0.260	0.281	0.177	-0.117
	(0.058)	(0.267)	(0.012)	(0.412)	(0.039)	(0.251)	(0.373)	(0.008)	(0.007)	(0.014)	(0.170)	(0.136)
CAR4	0.325	0.089	0.323	0.020	0.470	-0.173	-0.028	0.159	-0.298	0.334	0.118	-0.045
	(0.059)	(0.216)	(0.008)	(0.404)	(0.011)	(0.257)	(0.476)	(0.062)	(0.006)	(0.023)	(0.302)	(0.325)
CAR5	0.380	0.167	0.447	0.036	0.542	-0.189	-0.112	0.242	-0.317	0.366	0.182	-0.094
	(0.071)	(0.124)	(0.037)	(0.336)	(0.002)	(0.282)	(0.413)	(0.085)	(0.042)	(0.106)	(0.251)	(0.319)

TABLE 7 (Continued)

Regression of Future Size-Adjusted Returns on Ranked Values of Firm Value Components interacted with Institutional Ownership

Panel D: Regression with Interactions of Institutional Ownership classified by Fiduciary Standards

Four-year Horizon

	RBVC	RBVC* RBNK	RBVC* RIA	RBVC* RINS	RBVC* RP&E	RAXC	RAXC* RBNK	RAXC* RIA	RAXC* RINS	RAXC* RP&E	RTVC	RTVC* RBNK	RTVC* RIA	RTVC* RINS	RTVC* RP&E
CAR1	-0.007	0.047	0.035	-0.028	0.026	0.049	0.061	0.077	-0.182	0.039	-0.082	-0.025	-0.084	0.243	-0.026
	(0.401)	(0.119)	(0.212)	(0.139)	(0.358)	(0.113)	(0.256)	(0.201)	(0.085)	(0.382)	(0.106)	(0.421)	(0.167)	(0.026)	(0.443)
CAR2	0.000	0.082	-0.010	0.018	0.071	0.124	-0.023	0.090	-0.284	0.130	-0.210	0.040	0.042	0.276	-0.074
	(0.498)	(0.071)	(0.443)	(0.325)	(0.122)	(0.027)	(0.447)	(0.263)	(0.058)	(0.266)	(0.011)	(0.409)	(0.408)	(0.055)	(0.366)
CAR3	-0.106	0.069	0.044	0.110	0.184	0.145	-0.176	0.203	-0.338	0.215	-0.277	0.240	-0.105	0.292	-0.155
	(0.171)	(0.141)	(0.368)	(0.115)	(0.019)	(0.019)	(0.294)	(0.145)	(0.033)	(0.303)	(0.003)	(0.286)	(0.288)	(0.066)	(0.358)
CAR4	-0.081	0.287	-0.018	0.125	0.214	0.184	-0.198	0.262	-0.411	0.283	-0.301	0.252	-0.097	0.327	-0.217
	(0.347)	(0.010)	(0.427)	(0.169)	(0.023)	(0.025)	(0.301)	(0.115)	(0.033)	(0.321)	(0.000)	(0.255)	(0.359)	(0.132)	(0.349)
CAR5	-0.101	0.441	-0.138	0.255	0.398	0.246	-0.269	0.269	-0.559	0.440	-0.312	0.272	0.070	0.373	-0.447
	(0.369)	(0.008)	(0.171)	(0.018)	(0.005)	(0.039)	(0.191)	(0.200)	(0.056)	(0.274)	(0.002)	(0.193)	(0.421)	(0.179)	(0.260)

One-year Horizon

	RBVC1	RBVC1* RBNK	RBVC1* RIA	RBVC1* RINS	RBVC1* RP&E	RAXC1	RAXC1* RBNK	RAXC1* RIA	RAXC1* RINS	RAXC1* RP&E	RTVC1	RTVC1* RBNK	RTVC1* RIA	RTVC1* RINS	RTVC1* RP&E
CAR1	0.069	0.029	0.006	-0.007	0.031	0.106	0.077	0.071	-0.154	0.009	-0.075	-0.028	-0.051	0.203	-0.004
	(0.010)	(0.102)	(0.453)	(0.362)	(0.295)	(0.041)	(0.189)	(0.267)	(0.104)	(0.475)	(0.132)	(0.387)	(0.285)	(0.031)	(0.491)
CAR2	0.181	0.060	-0.064	0.066	0.069	0.229	0.009	0.134	-0.269	0.096	-0.154	0.026	0.045	0.244	-0.050
	(0.024)	(0.083)	(0.220)	(0.026)	(0.079)	(0.022)	(0.475)	(0.148)	(0.113)	(0.323)	(0.007)	(0.420)	(0.364)	(0.102)	(0.398)
CAR3	0.197	0.073	-0.040	0.137	0.133	0.289	-0.061	0.264	-0.344	0.176	-0.211	0.122	-0.081	0.307	-0.097
	(0.088)	(0.053)	(0.372)	(0.032)	(0.083)	(0.028)	(0.421)	(0.107)	(0.048)	(0.334)	(0.002)	(0.350)	(0.355)	(0.057)	(0.389)
CAR4	0.311	0.266	-0.101	0.149	0.148	0.390	-0.120	0.325	-0.418	0.316	-0.201	0.188	-0.064	0.341	-0.231
	(0.085)	(0.052)	(0.146)	(0.104)	(0.183)	(0.005)	(0.360)	(0.095)	(0.055)	(0.305)	(0.024)	(0.277)	(0.419)	(0.114)	(0.312)
CAR5	0.333	0.425	-0.192	0.249	0.249	0.457	-0.202	0.407	-0.590	0.447	-0.200	0.219	0.000	0.433	-0.390
	(0.125)	(0.048)	(0.075)	(0.040)	(0.088)	(0.001)	(0.280)	(0.109)	(0.077)	(0.280)	(0.149)	(0.270)	(0.500)	(0.175)	(0.261)

[1] See table 1 for variable definitions. CAR1-CAR6 are the buy-and-hold size-adjusted returns 1-6 years after the Value Line forecast release. RBV, RAXC, RTVC, RSIZE, RBETA, and REP are the scaled decile rank values of BVC, AXC, TVC, SIZE, BETA, and EP respectively. RPIH is the quintile of total institutional ownership. The PIH variable is replaced by the other variables indicated in the top row, where DED = dedicated, QIX = quasi-indexer, TRA = transient, BNK= banks, IA = investment advisers, INS = insurance companies, and P&E = pensions and endowments. Regressions are run yearly and mean coefficients are reported. The p-values in parentheses are based on a standard error derived from the distribution of these coefficients, adjusted for serial correlation.