On the Persistence and Pricing of Industry-Wide and Firm-Specific Earnings, Cash Flows, and Accruals*

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Abstract

Economic theory suggests that the industry-wide component of firm performance is more persistent than the firm-specific component. This paper tests whether investors fail to fully appreciate the relatively higher (lower) persistence of industry-wide (firm-specific) earnings. Consistent with predictions, we find that the industry-wide component of earnings is a significant predictor of future stock returns. We show that this form of mispricing is distinct from the accrual anomaly (Sloan 1996). A hedge portfolio trading strategy that exploits signals from both industry fundamentals and accounting accruals generates abnormal returns in excess of either strategy alone. Additional evidence suggests that the market underreacts (overreacts) to industry-wide cash flows (firm-specific accruals), but correctly prices both industry-wide accruals and firm-specific cash flows.

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I. INTRODUCTION

This paper examines the relation between industry-wide and firm-specific information contained in earnings and the extent to which this information is reflected in stock prices. Economic theory has long suggested that firm performance determined by industry fundamentals (e.g., consumer taste, production technology, and regulatory environment) is relatively long-lasting. On the other hand, performance that deviates from industry norms tends to dissipate more quickly because learning and imitation improve industry losers' performance but erode industry winners' competitive edge (e.g., Mueller 1977, 1986, 1990; Waring 1996). To the extent that accounting earnings are a (noisy) measure of economic profits, we expect the industry-wide component of earnings to be more persistent than the firm-specific component. Prior research in accounting, however, shows that investors tend to fixate on reported earnings without recognizing differences in the persistence of its components (e.g., Sloan 1996). As a result, we expect the market to underreact to the higher persistence of the industry-wide component of earnings, leading to predictable future stock returns.

Our focus on economic fundamentals represents a departure from Sloan's (1996) influential work on accruals and cash flows, which are components of earnings defined by accounting systems (Dechow 1994; Subramanyan 1996). He shows that even though the accrual component is less persistent than the cash flow component, stock prices act as if investors fail to fully appreciate this difference. Thus, we also gauge the differential persistence and pricing of earnings components classified by *both* economic forces and accounting constructs. If both factors contribute to mispricing, we expect future stock returns to be highest for firms with a combination of high industry-wide earnings and low

accruals and lowest for firms with a combination of low industry-wide earnings and high accruals.

As a further refinement, we decompose industry-wide and firm-specific earnings into their respective cash flows and accruals components. Taken together, the arguments above suggest that industry-wide cash flows is the most persistent component of earnings, while at the other extreme firm-specific accruals is the least persistent. The relative persistence of the other two components – industry-wide accruals and firm-specific cash flows – is less clear. On the one hand, there is robust prior evidence that cash flows is more persistent than accruals. On the other hand, economic theory suggests that industry-wide performance is more persistent than firm-specific performance. Which one of these effects dominates in a comparison of industry-wide accruals and firm-specific cash flow is thus an open empirical question.

We test our empirical predictions over the period 1999-2008. Following Bhojraj, Lee, and Oler (2003), we use Global Industry Classification Standard (GICS) industry codes and define industry-wide earnings as average earnings (scaled by assets) of all firms in the same eight-digit GICS industry. To ensure that the calculation of industry-wide earnings is based on contemporaneously available data and our hedge portfolio strategy is implementable, we exclude firms with fiscal year-ends that are different from the dominant fiscal year-end in the industry. We define firm-specific earnings as the difference between a firm's reported earnings (scaled by assets) and the industry-wide earnings.

As predicted, we find a significant positive association between industry-wide earnings and future stock returns. A trading strategy taking a long position in the highest decile of industry-wide earnings and a short position in the lowest decile of industry-wide earnings yields a 17.3% annualized return (before transaction costs) in the first year after portfolio formation and a 7.1% annualized return in the second year. The results are stable across

the ten-year sample period as all of the yearly hedge portfolio returns are positive. Moreover, results from the estimation of a regression controlling for other factors that may be correlated with industry-wide earnings and future abnormal stock returns show that our findings are robust to size, book-to-market, firm and industry momentum (Moskowitz and Grinblatt 1999), the accrual anomaly (Sloan 1996), and the net operating asset anomaly (Hirshleifer, Hou, Teoh, and Zhang 2004). Inferences are also consistent using alternative industry classifications (i.e., the Standard Industry Classification (SIC) or the North America Industry Classification System (NAICS)), although the effects are much less pronounced, consistent with greater noise in these industry groupings. Finally, hedge returns vary predictably with transaction costs/arbitrage risk, and the firm's information environment.

We also conduct Mishkin (1983) tests to provide more direct evidence of stock prices under- (over-) weighting the industry-wide (firm-specific) component of earnings (e.g., Abarbanell and Bernard 1992; Sloan 1996). Consistent with predictions, industry-wide earnings are significantly more persistent than firm-specific earnings. However, prices behave as if investors fail to fully distinguish this differential persistence as stock prices place similar weights on these two earnings components in forecasting one-year-ahead earnings. Thus, future returns predictably reflect the correction of this underreaction to industry-wide earnings.

Importantly, we show that the predictability of returns based on industry fundamentals appears largely orthogonal to return predictability based on accounting constructs (Sloan 1996). One-year-ahead hedge returns between extreme quintiles formed on industry-wide earnings (accruals) are 15.6% (7.1%), suggesting that the strategies are capturing different mispricing phenomenon. Moreover, sorting on both signals reveals that future returns are highest in the portfolio with a combination of high industry-wide earnings and low accruals

and lowest in the portfolio with a combination of low industry-wide earnings and high accruals. The hedge return to this combined approach is 22.6%, which exceeds the return of either trading strategy in isolation. Thus, our findings are incremental to the previously documented accrual anomaly, and show the importance of industry fundamentals in determining the persistence and pricing of earnings and its components.

Finally, consistent with predictions, we find that industry-wide cash flows is the most persistent component of earnings while firm-specific accruals is the least. Falling between these extremes, there is no statistical difference in the persistence of industry-wide accruals and firm-specific cash flows. Thus, the higher (lower) persistence of cash flow (accruals) is attributable primarily to the industry-wide (firm-specific) component, and it is these components that we expect to drive mispricing. Consistent with predictions, we find that stock prices significantly underweight industry-wide cash flows but not firm-specific cash flows and significantly overweight firm-specific accruals but not industry-wide accruals.

Our evidence that the market underreacts to the persistence of industry-wide earnings adds to the important stream of research on earnings- and accruals-based market anomalies. We focus on components of earnings driven by industry fundamentals, and show that mispricing from this source is distinct from other anomalies in the literature. Moreover, with respect to the widely-investigated accruals anomaly, we show that the underreaction to cash flows is driven by the industry-wide component while the overreaction to accruals is driven by the firm-specific component. There is no evidence of mispricing associated with either firm-specific cash flow or industry-wide accruals.

Our paper is also related to research examining the industry-wide and firm-specific information in earnings and how this information is incorporated into stock prices. Brown and Ball (1967) find that a significant portion of the variability of a firm's earnings can be explained by market- and industry-level news. Other papers examine how quickly industry-

wide and firm-specific information is impounded in stock prices, with mixed results. Ayers and Freeman (1997) posits that investors are able to anticipate the industry-wide component of earnings earlier than the firm-specific component and shows that post-earnings announcement drift is primarily attributable to firm-specific earnings changes. Elgers, Porter, and Xu (2008) finds no evidence of drift associated with either component. They attribute the difference in results to research design issues, including measurement error in the unexpected earnings proxy. Piotroski and Roulstone (2004) investigate how the firm's information environment affects the relative amount of industry-wide and firm-specific earnings news incorporated into stock prices. Hui and Yeung (2012) show that investors' delayed response to analysts' forecast revisions that appear in industry reports is primarily driven by an underreaction to the industry-wide earnings news contained in these industry reports. Using a broad cross-section of firms, we show that investors do not seem to fully understand the persistence of the industry-wide and firm-specific components of earnings, cash flows, and accruals, and are systemically surprised when industry-wide earnings and cash flows are revealed to be more persistent than firm-specific earnings and accruals.

The remainder of our paper is organized as follows: Section II outlines our sample formation and the measurement of our primary test variables. Section III reports results of tests related to industry-wide and firm-specific earnings. Section IV reports results of tests related to industry-wide and firm-specific earnings components. Section V reports results of additional analyses. Section VI concludes.

II. DATA AND VARIABLE MEASUREMENT

Sample

Our sample selection starts with all firms in the Compustat universe with a GICS code during the period 1999-2008 (110,143 firm-years). GICS codes become widely available for Compustat firms in 1999, and we use this analyst-based industry classification because it better groups firms for capital market research (Ramnath 2002; Bhojraj et al. 2003; Hui and Yeung 2012). As a robustness check, we show later in the paper that the results are weaker using a four-digit SIC industry classification or a six-digit NAICS classification.

We exclude financial institutions (two-digit GICS code = 40) because the nature of accruals for financial institutions differs from that for industrial firms, leaving 82,183 observations. To avoid the impact of illiquid stocks and distressed firms, we delete firms with stock price below $5 at the end of the fiscal year (Fama and French 2008), which results in 49,238 firm-year observations.[1] We then drop firm years with negative book to market ratio or falling in the top and bottom 1% of book-to-market ratio, which leaves us 46,937 firm-year observations.

To avoid look-ahead bias in the calculation of industry-wide earnings (discussed below), we exclude firms with fiscal year-ends that are later than the dominant year-end in the industry. We also exclude firms that end their fiscal years one quarter before the dominant year-end as the market would know a significant portion of their next year's earnings at the beginning of the return accumulation period.[2] These two requirements eliminate approximately 18% of the observations. Additionally, we require that an industry have at least two firms in a given year to calculate industry-wide earnings, which eliminates approximately 1% of the observations.

[1] Fama and French (2008) emphasize the disproportional impact of micro- and small-stocks in cross-sectional studies. To avoid the effects of these stocks characterized by low liquidity and high arbitrage costs, we focus on stocks with price greater than $5. Our inferences are similar when we use $1 as the alternative cutoff.
[2] An alternative procedure frequently adopted in the literature is to include only December 31 fiscal year-end firms. This approach is likely to systematically exclude most, it not all, firms in certain industries, e.g., retail.

After excluding firm-years with missing earnings before extraordinary items, operating cash flows, and accruals, we are left with 32,031 observations. We then match these Compustat firms with the CRSP stock files, which reduces our sample to 26,725 firm years. We further drop firm-years with missing returns data for the one-year-ahead holding period, leaving 25,710 firm-year observations.[3] Lastly, we drop observations without the requisite data to compute control variables in the main regression model, resulting in our final sample of 20,625 firm-year observations.

Panel A of Table 1 shows the number of firms in our sample by year. Although the sample is fairly evenly distributed across years, we observe fewer firms in a bear market, consistent with the general trend observed in Compustat. Panel B of Table 1 shows the number of firms across NYSE size deciles. We find that our sample tilts slightly toward median-sized firms, as our sample includes AMEX and NASDAQ firms which are weighted towards the smaller NYSE size deciles and at the same time we exclude small stocks with price below $5.

Panel C of Table 1 shows the number and frequency of firms in each major industry sector defined by the two-digit GICS code, as well as the frequency of all firms in the Compustat-CRSP population. This comparison shows that the industry composition of our sample is similar to that of the Compustat-CRSP population. The largest sectors in the sample are information technology (20.85%), industrials (17.80%), consumer discretionary (17.39%), and health care (15.51%).

Computation of main variables and descriptive statistics

Our tests require partitioning earnings into its industry-wide and firm-specific components. Following prior studies (e.g., Brown and Ball 1967; Ayers and Freeman 1997;

[3] We start the return holding period three months after the fiscal year-end. A firm is included in our sample if it survives for even one month during the holding period. On the other hand, a firm is excluded if it is delisted during the three months after the fiscal year-end.

Hui and Yeung 2012), industry-wide earnings represent the common component of earnings for all firms in the same industry, while firm-specific earnings are the deviations of individual firms' earnings from the industry average.[4] Specifically, let $Earn_{i,j,t}$ denote the earnings of firm i in industry j for year t, measured as income before extraordinary items scaled by average assets. Assuming there are N firms in industry j, the industry-wide earnings of industry j for year t is defined as:

$$IndE_{j,t} = 1/N \sum_{i=1}^{N} Earn_{i,j,t} \quad (1)$$

and firm-specific earnings of firm i in industry j for year t is defined as

$$FirmE_{i,j,t} = Earn_{i,j,t} - IndE_{j,t}\,. \quad (2)$$

Table 2 provides descriptive statistics for key variables of interest.[5] The median of *Earn* is 0.014, indicating that return on assets for a typical firm in our sample is around 1.4%. By construction, the mean of *FirmE* is zero. The standard deviation of *FirmE* is much higher than that of *IndE*, consistent with the expectation that firm-specific profitability is the relatively more volatile earnings component. Firms in our sample experience significantly positive sales growth, as mean and median *SalesG* are 27.3% and 14.1%. On the other hand, mean (median) value of *IndMom* is 0.066 (0.029), indicating modest industry-wide return momentum in our sample.

To investigate how selected firm characteristics vary with industry-wide earnings, we form decile portfolios sorted annually on *IndE*. As shown in Table 3, the number of

[4] Our measure of industry-wide earnings thus contains the impact of *market-wide* forces on each industry. Because the main variable of interest, *abnormal* stock returns, excludes market-wide earnings information, including market-wide earnings in our measure of industry-wide earnings does not bias our findings. Untabulated results are similar when we subtract average earnings of all firms in a given year from *IndE*.

[5] MV_t is the market value of equity at the end of fiscal year t. BM_t is the book to market ratio at the fiscal year-end. $IndMom_t$ is the six-month size-adjusted buy-and-hold (eight-digit GICS) industry average stock return ending the third month after the fiscal year-end. $FMom_t$ is the six-month size-adjusted buy-and-hold stock return ending the third month after fiscal year-end. $Arbitrage_t$ is measured as the standard deviation of residuals from the market model in the 48 months (20 months at the minimum) before the year-end (Mashruwala, Rajgopal, Shevlin 2006). $SalesG_t$ is the average sales growth in the prior two years. All continuous control variables are winsorized at the one- and 99-percentiles.

observations varies somewhat across deciles because ranks are determined at the industry-level and the number of firms varies within each industry. Panel A of Table 3 reports the number of firm-years in each *IndE* decile and the average industry-wide earnings for each decile portfolio. We observe that mean *IndE* increases from −0.154 in the Low decile to 0.091 in the High decile.

Panel B of Table 3 reports average market value (*MV*), book-to-market ratio (*BM*), industry momentum (*IndMom*), firm momentum (*FMom*), stock price (*Price*), prior sales growth, and arbitrage risk (*Arbitrage*) for each decile portfolio. The evidence shows that *IndE* is significantly positively correlated with *BM*, *Price* and *MV*, reflecting the direct impact of earnings on book value and its indirect effect on stock prices and market capitalization. *IndE* is negatively correlated with *SalesG*, indicating that industries with poor performance have experienced rapid revenue growth. We also observe *IndE* is negatively correlated with *Arbitrage*, suggesting that it is more difficult to correct mispricing for firms in decile portfolios with low *IndE*. Lastly, the insignificant correlation between *IndE* and *IndMom* is interesting as it indicates that earnings-based industry momentum is orthogonal to return-based industry momentum.

III. ANALYSIS OF INDUSTRY-WIDE AND FIRM-SPECIFIC EARNINGS

Univariate results

Our main prediction is that investors underreact to industry-wide earnings causing future stock prices to drift in the direction of industry-wide earnings. Table 4 reports future average abnormal stock returns for each decile portfolio of *IndE*. In column (1), CAR_{t+1} is the cumulative abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. We adjust a firm's 12-month stock return by its corresponding NYSE and AMEX size decile return. If a

stock is de-listed during the return accumulation period, we obtain delisting returns following Shumway (1997) and Shumway and Warther (1999) and assume the proceeds are reinvested to earn the average return of the matching size decile portfolio.[6]

The results show an almost monotonic increase in CAR_{t+1} in column (1) from the Low decile (−0.112) to the High decile (0.061). The difference between the average CAR_{t+1} in the Low and High deciles is 17.3% (t = 9.96), which indicates a hedge return that is both economically and statistically significant. We find similar results in column (2) where the average CAR_{t+2} generally increases from the Low decile (−0.042) to the High decile (0.029), producing a statistically significant difference of 0.071 (t = 3.48).[7] The evidence therefore suggests that the ability of industry-wide earnings to predict future returns is relatively long-lasting, although the magnitude of the hedge portfolio return decreases by more than 50% from the first year to the second year after portfolio formation. Finally, the evidence in column (3) indicates that industry-wide earnings do not predict three-years-ahead abnormal returns (CAR_{t+3}).[8] We observe neither a systematic pattern in average CAR_{t+3} across the ten *IndE* deciles nor a significant spread in the average CAR_{t+3} between the top and bottom *IndE* deciles (0.032, t = 1.32).

Figure 1 displays the one-year-ahead hedge portfolio returns by year over our sample period. The returns are positive in every year during our ten-year sample period. We observe the highest return of 45% in 1999 and the lowest of 2% in 2004. Although the returns are somewhat lower during the second half of the sample period, the average is

[6] For firms that are delisted during the future return period, we calculate the remaining return by taking CRSP's delisting return and then reinvesting the proceeds in the equally-weighted reference portfolio. For firms delisted due to poor performance (delisting codes 500 and 520–584), we use a −35 percent delisting return for NYSE/AMEX firms and a −55 percent delisting return for NASDAQ firms.

[7] We assume portfolio rebalancing at the end of year t+1 and drop firms that are delisted during year t+1 when calculating the holding period return for year t+2, reducing the sample size to 18,922.

[8] To calculate abnormal returns for year t+3, the sample period is 1999 to 2007 due to the lack of three-year-ahead return data for 2008. We also drop firms that are delisted during either year t+1 or year t+2, reducing the sample size to 16,089.

over 8% during 2004-2008. The fact that the returns are consistently positive over time suggests that the findings are not likely explained by omitted risk factors.

Figure 2A provides time-series plots of average earnings for the top and bottom deciles of $IndE_t$ over a [t-3, t+3] window, where year zero is the year in which firms are ranked into the extreme deciles.[9] Figure 2B, on the other hand, provides time-series plots of average earnings for the top and bottom deciles of $FirmE_t$ over the same seven-year window. We observe in Figure 2A that while earnings performance is quite persistent for positive *IndE*, there is a more obvious mean-reverting tendency for negative *IndE*. In contrast, Figure 2B shows much more conspicuous pattern of mean reversion in earnings for both positive and negative *FirmE*. This is consistent with our expectation that the firm-specific component of earnings dissipates more rapidly.

Overall, the univariate results show that the differences in extreme industry-wide earnings are quite persistent. In addition, industry-wide earnings seem to be a reliable predictor of one- and two-years-ahead abnormal stock returns. Although these results are consistent with market underreaction to industry-wide earnings, we provide more direct evidence on the manner in which prices incorporate industry and firm earnings information in the next section.

Mishkin tests of mispricing

We posit that the underlying cause for a drift associated with industry-wide earnings is that this component of earnings is more persistent than firm-specific earnings but that investors fail to fully appreciate this difference. To provide more direct evidence on this

[9] Because we require year t+3 data, the sample period for this analysis is 1999-2007. In addition, firms are required to survive during the seven-year window.

proposition, we use the Mishkin (1983) test methodology to estimate the implicit weights placed on earnings components in prices (Abarbanell and Bernard 1992; Sloan 1996).[10]

We first test whether industry-wide earnings are more persistent than firm-specific earnings by estimating the following ordinary least square (OLS) regression:

$$Earn_{t+1} = a_0 + a_1 IndE_t + a_2 FirmE_t + \varepsilon_{1t+1}, \quad (3a)$$

where $Earn_{t+1}$ is the reported earnings for year t+1, and $IndE_t$ and $FirmE_t$ are industry-wide and firm-specific earnings for year t, respectively. We expect that the association between industry-wide earnings and future earnings is greater than the association between firm-specific earnings and future earnings (i.e., $a_1 > a_2$).[11]

To estimate the weights implicit in stock returns on the two earnings components in predicting one-year-ahead earnings, we use the following pricing regression model:

$$CAR_{t+1} = Multiple \times (Earn_{t+1} - \alpha_1 IndE_t - \alpha_2 FirmE_t) + \varepsilon_{2t}, \quad (3b)$$

where CAR_{t+1} is the (size-adjusted) abnormal return for year t+1, and *Multiplier* is the earnings response coefficient. If stock prices behave as if investors fail to fully appreciate the differential persistence of earnings components, we expect $\alpha_1 = \alpha_2$ in model (3b). Comparing coefficient estimates across models (3a) and (3b), we expect $a_1 > \alpha_1$ and $a_2 < \alpha_2$.

Before we discuss the results of these estimations, Panel A of Table 5 shows the results of base-line regressions that forecast one-year-ahead earnings with current total earnings in column (1) and the forecasting equation implicit in stock returns in column (2). We find in column (1) that the estimated coefficient on current earnings ($Earn_t$) is 0.702. Consistent with the market on average correctly pricing total earnings, we find in column (2) that the implied weight on $Earn_t$ is 0.736, similar to the estimated persistence of earnings ($p = 0.19$).

[10] Note that the inferences from Mishkin tests rely on comparing the magnitude of estimated coefficients, which contain estimation errors as the regression specification is imperfect. We explicitly control for other variables that are correlated with returns in our analysis in the next section.

[11] Because estimation of equation (3a) requires $Earn_{t+1}$, firms that do not report one-year-ahead earnings are excluded from this analysis.

Turning to the main findings, Panel B column (1) presents the results of estimating equation (3a). The estimated coefficient on industry-wide earnings (*IndE*) is 0.840, while that on firm-specific earnings (*FirmE*) is 0.652. An *F*-test indicates that these two coefficients differ significantly ($p < 0.01$). Thus, the evidence indicates that the industry-wide component of earnings is significantly more persistent than the firm-specific component, as predicted.

Column (2) shows the estimated weights on industry-wide and firm-specific earnings implicit in stock prices. The estimated coefficient on *IndE* is 0.673, insignificantly different from 0.757, the estimated coefficient on *FirmE* ($p = 0.63$). Furthermore, the Chi-square tests comparing estimated coefficients in columns (1) and (2) indicate that stock prices significantly underweight *IndE* (i.e., $0.673 < 0.840$, $p < 0.01$) but overweight *FirmE* (i.e., $0.757 > 0.652$, $p < 0.01$). These results are consistent with our prediction that investors fixate on reported earnings without recognizing the higher (lower) persistence of performance attributable to the industry-wide (firm-specific) component of earnings.

Regression results

To test whether the observed univariate return predictability is robust, we estimate the following OLS regression to control for other variables that may be correlated with both industry-wide earnings and future abnormal stock returns:

$$Car_{t+1} = b_0 + b_1 IndE10_t + b_2 PAcc10_t + b_3 NOA10_t + b_4 Log(MV)_t + b_5 BM_t + b_6 IndMom_t + b_7 FMom_t + b_8 Arbitrage_t + b_9 SalesG_t + \varepsilon_{3t+1}, \quad (4)$$

where $IndE10_t$ represents decile-ranked industry-wide earnings converted to [0,1], $PAcc10_t$ is decile-ranked percent accruals for year t, defined as the difference between net income and the net cash flow from operating activities, deflated by absolute value of net income (Sloan 1996; Hafzalla, Lundholm, and Van Winkle 2011), and NOA_t is decile-ranked net

operating assets deflated by lagged total assets for year t (Hirshleifer et al. 2004).[12] All other variables are as defined above.

We predict that the industry-wide earnings component is positively associated with one-year-ahead abnormal stock returns (i.e., $b_1 > 0$). We also control for accounting accruals and net operating assets, as Sloan (1996) and Hirshleifer et al. (2004) find that accruals and cumulative accruals predict negative future stock returns. We use percent accruals in particular because Hafzalla et al (2011) find much stronger return predictability when accruals are deflated by absolute net income. If market value and book-to-market ratio are proxies for risk, we predict a negative coefficient for *Log(MV)* and a positive coefficient for *BM*. We predict positive coefficients for *IndMom* and *FMom*, as prior research finds both industry and firm momentum in stock prices (Moskowitz and Grinblatt 1999, Jegadeesh and Titman 1993). Finally, we control for *Arbitrage* and *SalesG* because univariate results in Table 3 indicate that these two variables are correlated with industry-wide earnings.

Column (1) of Table 6 presents the results of estimating equation (4). The coefficient estimate on *IndE10* is significantly positive (0.101, t = 4.36), indicating that the univariate results are robust to the control variables included in the regression.[13] The magnitude of the coefficient indicates that the hedge portfolio return remains over 10% even after controlling for other factors. Consistent with prior findings that accruals and net operating assets predict future negative stock returns, we find significantly negative coefficients on *PAcc10* and *NOA10*. However, the magnitude of future abnormal returns is much smaller (i.e., –4.9% and –3.3%, respectively). We find significantly positive coefficients on *BM* and *IndMom*, consistent with the book-to-market and industry momentum effects.

[12] Following Hirshleifer et al. (2004), net operating assets is the difference between operating assets and operating liabilities, where operating assets is defined as total assets minus cash and short-term investments and operating liabilities is defined as total assets minus debt included in current liabilities, long term debt, minority interests, preferred stocks, and common equity.

[13] All t-statistics in the regression analyses are based on firm and year double clustered standard errors.

Because we document that two-years-ahead abnormal stock returns are associated with industry-wide earnings in Table 4, we also report results using CAR_{t+2} as the dependent variable in columns (2). Because we are explaining CAR_{t+2} in these two regressions, all control variables are measured at the end of year t+1. For a fair comparison, accruals and net operating assets are measured at the end of year t. Consistent with the univariate results, the magnitude of the estimated coefficient on *IndE10* is smaller than that in the one-year-ahead abnormal return regression (0.051, t = 2.28). Similarly, the return predictability by accruals and net operation assets also declines and becomes statistically insignificant for $NOA10_t$. Overall, the results indicate that the univariate results are robust to controlling for several other important factors that are correlated with future stock returns.[14]

Columns (3) and (4) of Table 6 present the results when we use three-factor adjusted abnormal stock returns. Specifically, to derive abnormal stock returns we subtract the 12-month buy-and-hold return of the size, book-to-market, and momentum matched portfolio from the raw return (i.e., DGTW returns by Daniel et al 1997; Wermers 2004).[15] The coefficient estimate on *IndE10* remains large and significant (0.062, t = 2.85) in the one-year-ahead return regression and reduces to 0.041 (t = 1.88) in the two-year-ahead return regression. In contrast, the estimated coefficients on *PAcc10* are much smaller in magnitude and statistically insignificant.

We also replicate Balakrishnan, Bartov, and Faurel's (2010) more recent finding that total earnings predict future stock returns. Consistent with Balakrishnan et al. (2010), when we substitute the decile of total earnings for our main variable *IndE10* in the multiple regression of CAR_{t+1}, we find a significant coefficient for decile of total earnings

[14] The regression results are very similar if we use the Fama-MacBeth regressions.
[15] The DGTW benchmarks are available via http://www.smith.umd.edu/faculty/rwermers/ftpsite/Dgtw/coverpage.htm

(0.084, t = 2.46). However, when we also include *IndE10* in the regression, the coefficient for the decile of total earnings is insignificant (t = 1.48) while the coefficient for IndE10 remains large and significant (0.100, t = 3.86). Thus, return predictability by total earnings appears to be driven by the industry-wide component of earnings during our sample period.

IV. INDUSTRY-WIDE AND FIRM-SPECIFIC CASH FLOWS AND ACCRUALS

Comparison of the industry-wide earnings and accruals trading strategies

Our main focus is on the persistence of earnings components determined by industry fundamentals. Given prior findings that the market fails to fully appreciate the persistence of earnings components defined accounting system (i.e., accruals), a natural question is whether our findings are distinct from the accrual anomaly documented by Sloan (1996). Although the significant results for industry-wide earnings in Table 6 that control for accounting accruals suggest that the mispricing of industry-wide earnings is not subsumed by the accrual anomaly, we provide more detailed evidence on the pricing of earnings components classified by *both* economic fundamentals and accounting constructs in this section.

To examine whether an underreaction to the industry-wide component of earnings is distinct from an overreaction to the accruals component of earnings, we sort firms into quintiles independently by industry-wide earnings (*IndE*) and by accruals (*PAcc*). If both economic and accounting factors contribute to mispricing, we expect future stock returns to be highest for firms in the intersection of the top *IndE* quintile and the bottom *PAcc* quintile. On the other hand, we expect future stock returns to be the lowest in the intersection of the bottom *IndE* quintile and the top *PAcc* quintile.[16]

[16] We utilize extreme quintiles for the analysis in this section rather than extreme deciles because focusing on the intersection of extreme deciles reduces the number of observations in each portfolio by a factor of 10 which

To provide benchmarks for comparison, we first present in Panel A of Table 7 the average one-year-ahead future stock returns (CAR_{t+1}) from the separate industry-wide earnings and accruals strategies. We find that returns to a strategy of buying firms in the top *IndE* quintile and shorting firms in the bottom *IndE* quintile are 15.6%, lower than a similar strategy based on decile portfolios reported in Table 4. By comparison, a strategy of buying firms in the bottom *PAcc* quintile and shorting firms in the top *PAcc* quintile earns 7.1%.[17] The difference in returns suggests that the strategies are capturing different mispricing phenomenon.

Results from sorting on both *IndE* and *PAcc* in Panel B reveal that future returns are highest in the portfolio with high industry-wide earnings and low accruals (*IndE1&PAcc5*) and lowest in the portfolio with low industry-wide earnings and high accruals (*IndE5&PAcc1*). Specifically, the average return for the firms in the *IndE1&PAcc5* portfolio is −15.8%, the lowest among all cells in Panel B, while the average return for the firms in the *IndE5&PAcc1* portfolio is 6.8%, the highest among all the cells. The hedge return to this combined approach is 22.6%, which exceeds the return of either trading strategy in isolation. Thus, our findings are incremental to the previously documented accrual anomaly, and show the importance of industry fundamentals in determining the persistence and pricing of earnings.[18]

Persistence of industry-wide and firm-specific cash flows and accruals

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introduces more variability into the estimates. Collins and Hribar (2000) also utilize quintiles when comparing trading strategies for the post-earnings announcement drift and accruals anomalies.

[17] This hedge portfolio return is much lower than Sloan's (1996) results, but consistent with the results from a more recent and comparable sample period (e.g., Hafzalla, Lundholm, and Van Winkle 2011).

[18] One concern associated with our approach is that the additional abnormal returns in the combined strategy might be the result of taking positions in a small subset of firms with more extreme realizations of *IndE* or *PAcc*. To examine this issue, we construct hedge returns for the separate *IndE* and *PAcc* strategies that contain the same number of firm-years as the combined strategy. In particular, for the *IndE* (*PAcc*) strategy, the 1,100 firm-years with the lowest *IndE* (highest *PAcc*) are placed in the short portfolio, while the 575 firm-years with the highest *IndE* (lowest *PAcc*) are placed in the long portfolio. These separate *IndE* (*PAcc*) strategies result in abnormal returns of 15.8% (7.3%), similar to the findings reported in Panel A of Table 7. Thus, it is not the case that the combined sort merely identifies firms with more extreme *IndE* or *PAcc*.

Consideration of both industry fundamentals and accounting constructs suggests that industry-wide cash flows is the most persistent component of earnings and firm-specific accruals is the least persistent. The relative persistence of the other two components – industry-wide accruals and firm-specific cash flows – is less obvious as the industry and accounting forces affecting persistence are not acting in concert. In this section, we first discuss our method to decompose industry-wide and firm-specific earnings into their respective cash flow and accrual components, and then present results analyzing the persistence and pricing of the four disaggregated earnings components.

Computation of main variables

We first decompose industry-wide earnings ($IndE_t$) into industry-wide operating cash flows ($IndCF_t$) and industry-wide accruals ($IndAcc_t$):

$$IndE_t = IndCF_t + IndAcc_t \tag{5}$$

where $IndCF_t$ is the average of operating cash flows scaled by average assets (CF_t) for all firms in the same industry, and $IndAcc_t$ is the difference between $IndE_t$ and $IndCF_t$. Similarly, we decompose firm-specific earnings ($FirmE_t$) into firm-specific operating cash flows ($FirmCF_t$) and firm-specific accruals ($FirmAcc_t$):

$$FirmE_t = FirmCF_t + FirmAcc_t \tag{6}$$

where $FirmCF_t$ is the difference between CF_t and $IndCF_t$, and $FirmAcc_t$ is the difference between $FirmE_t$ and $FirmCF_t$.

Our argument regarding industry fundamentals suggests that the persistence of *IndCF* (*IndAcc*) is greater than the persistence of *FirmCF* (*FirmAcc*). Sloan's (1996) argument suggests that the persistence of *IndCF* (*FirmCF*) is greater than the persistence of *IndAcc* (*FirmAcc*). Taken together, we expect that the persistence of *IndCF* is highest and the

persistence of *FirmAcc* is lowest. The relative persistence of the other two components – *IndAcc* and *FirmCF* – is an open empirical question.

Panel A of Table 8 presents descriptive statistics for key variable of interest. Consistent with expectations, we find that, on average, cash flows are positive (= 0.093) and accruals are negative (= −0.054). Note that because the firm-specific component represents the deviation from the industry mean, the averages of *FirmCF* and *FirmAcc* are close to zero.[19] It follows that the mean of industry-wide cash flows (accruals) is close to the mean of total cash flows (total accruals). The results also indicate that the variation in cash flows and accruals is mainly driven by their firm-specific components. The standard deviation of *FirmCF* is over 1.5 times that of *IndCF*, while the standard deviation of *FirmAcc* is over twice that of *IndAcc*.

Panel B of Table 8 presents Pearson pair-wise correlations. *CF* and *Acc* are positively correlated with their respective industry-wide and firm-specific components.[20] Consistent with prior work, we find a negative correlation between cash flows and accruals (= −0.206). Interestingly, this negative correlation is largely driven by a negative correlation between firm-specific cash flows and firm-specific accruals (= −0.256).

Regression results

We use the following Mishkin generalized least square regressions to test the persistence and pricing of the various earnings components:

$$Earn_{t+1} = c_0 + c_1 IndCF_t + c_2 FirmCF_t + c_3 IndAcc_t + c_4 FirmAcc + \varepsilon_{5t+1} \quad (7a)$$

$$Ret_{t+1} = Multiple \times (Earn_{t+1} - \gamma_0 - \gamma_1 IndCF_t - \gamma_2 FirmCF_t - \gamma_3 IndAcc_t - \gamma_4 FirmAcc) + \varepsilon_{6t+1} \quad (7b)$$

In regression model (7a), we expect that the persistence of industry-wide cash flows (i.e., c_1) is highest while the persistence of firm-specific accruals is lowest (i.e., c_4).

[19] The averages are not exactly zero because firms with missing $Earn_{t+1}$ are excluded from this analysis.
[20] Note that the higher correlations associated with the firm-specific components indicate that variation in these components better captures the total variation in cash flow and accruals.

Regarding the pricing implications of the industry-wide and firm-specific components of cash flows and accruals, we expect that the underreaction associated with cash flows documented by Sloan (1996) is mainly driven by an underreaction to industry-wide cash flows because the higher persistence of cash flows is attributable to the industry-wide component. We use χ^2 likelihood tests to compare the estimated coefficients between models (7a) and (7b). If our prediction is correct, we expect $c_1 > \gamma_1$ (underreaction to industry-wide cash flows) and $c_2 = \gamma_2$ (no underreaction to firm-specific cash flows). Likewise, we predict that Sloan's (1996) evidence of an overreaction associated with accruals is mainly driven by an overreaction to firm-specific accruals because the lower persistence of accruals is attributable to the firm-specific component. In other words, we expect $c_4 < \gamma_4$ (overreaction to firm-specific accruals) and $c_3 = \gamma_3$ (no overreaction to industry-wide accruals).

Panel A of Table 9 reports our replication of prior findings (e.g., Sloan 1996) that the market underreacts to cash flows and overreacts to accruals. We find in our sample that the implied weight on *CF* in prices is significantly lower than the estimated persistence of *CF* (i.e., 0.720 < 0.776, p = 0.05). We also find that the implied weight on *Acc* in prices is significantly higher than the estimated persistence of *Acc* (i.e., 0.703 > 0.558, p <0.01).

The first column of Panel B of Table 9 shows the results of estimating model (7a). Consistent with our predictions, we find that the persistence of industry-wide cash flows is highest and the persistence of firm-specific accruals is lowest. Specifically, the estimated coefficient on *IndCF* (= 0.887) is significantly higher than the coefficients on the other components of earnings. In addition, the estimated coefficient on *FirmAcc* (= 0.498) is the lowest of all the earnings components. The estimated coefficient on *FirmCF* (= 0.731) is not significantly different from that on $IndAcc_t$ (= 0.770), indicating that industry-wide accruals

are as persistent as firm-specific cash flows, counter to the general notion that the persistence of cash flows is superior to that of accruals.

The second column of Panel B presents the results of estimating model (7b). Consistent with our expectations, we find that the estimated coefficient on *IndCF* in the return regression (= 0.643) is significantly lower than that in the earnings regression (= 0.887), while the estimated coefficient on *FirmCF* in the return regression (= 0.752) is similar to that in the earnings regression (= 0.731). These results indicate that the underreaction to cash flows is mainly attributable to its industry-wide component. Also consistent with our predictions, we find that the estimated coefficient on *FirmAcc* in the return regression (= 0.703) is significantly higher than that in the earnings regression (= 0.498), indicating that the market overweights the firm-specific accruals component in earnings. The estimated coefficient on *IndAcc* in the return regression (= 0.738) is similar to that in the earnings regression (= 0.770). Thus, the overreaction to accruals is mainly attributable to its firm-specific component. The insignificant results of the *F*-tests in the return regression further suggest that the market does not seem to differentiate the persistence of the four main components of earnings partitioned by fundamentals and accounting conventions.[21]

In sum, we find that industry-wide cash flows is the most persistent component of earnings while firm-specific accruals is the least. Falling between these extremes, there is no statistical difference in the persistence of industry-wide accruals and firm-specific cash flows. Thus, the higher (lower) persistence of cash flow (accruals) is attributable primarily

[21] Decomposing total accruals into discretionary and nondiscretionary components, Xie (2001) finds that discretionary accruals are less persistent than non-discretionary accruals and that future returns are stronger for the discretionary component. Following on this theme, we further decompose firm-specific accruals into discretionary (*FirmDA*) and nondiscretionary (*FirmNDA*) components, where *FirmDA* is estimated as the residual of the Jones' model and *FirmNDA* is the difference between *FirmAcc* and *FirmDA*. Substituting these two components for *FirmAcc* in Panel B of Table 9, untabulated results show that the persistence and pricing of *FirmNDA* and *FirmDA* is similar to *FirmAcc*. In other words, *FirmNDA* and *FirmDA* are the least persistent of the earnings components, and are over-weighted by the market. Moreover, there is no significant difference in the persistence and pricing of these two components.

to the industry-wide (firm-specific) component. Consistent with these results, we also find that stock prices significantly underweight industry-wide cash flows but not firm-specific cash flows and significantly overweight firm-specific accruals but not industry-wide accruals.

V. ADDITIONAL ANALYSES

Cross-industry evidence

Panel A of Table 10 presents the distribution of industry-wide earnings for each major industry sector. We observe that industries in consumer discretionary and consumer staples tend to have better performance during our sample period. On the other hand, industries in the healthcare industries tend to have the low industry-wide earnings.

In Panel B, we report hedge portfolio returns across quintile portfolios sorted on the persistence of industry-wide earnings. We estimate the persistence of industry-wide earnings based on a panel regression that predicts total earnings of current year using industry-wide earnings of prior year. We run this regression using all firms in the same eight-digit GICS industry for the prior ten years, and the estimated coefficient on the lagged industry-wide earnings is the proxy for earnings persistence. Results in Panel B indicate that hedge portfolio returns increase monotonically from the lowest quintile (= 4.3%, t = 0.86) to the highest quintile (32.8%, t = 6.83) of persistence of industry-wide earnings. This evidence is consistent with the notion that underreaction is driven by the mispricing of the persistence of industry-wide earnings.

Effects of transaction costs and firm information environment

We expect that illiquid stocks with high transaction costs are likely to exhibit higher return predictability, as arbitrageurs are less able to mitigate any mispricing. We thus examine cross-sectional variation in hedge returns across three transaction cost proxies: the

inverse of average daily dollar trading volume (in dollars) during year *t*, the inverse of the level of stock price, and arbitrage risk ($Arbitrage_t$), as defined above. Figures 3A to 3C present hedge portfolio returns across quintiles sorted on each of these proxies. For example, we sort firms into quintiles based on the inverse of trading volume. We then create *IndE* deciles within each of these volume quintiles. Figure 3A presents the difference in returns between the top and bottom *IndE* deciles across volume quintiles.

Across all three proxies, the evidence in Figures 3A to 3C indicates that hedge portfolio returns generally increase with transaction costs. The largest effect on hedge portfolio returns appears to be across the levels of *Arbitrage* risk in Figure 3C where in the highest quintile, the hedge portfolio return is over 30%. On the other hand, the hedge portfolio return is close to zero in the lowest *Arbitrage* quintile.

We also expect return predictability to be negatively associated with analyst following. Because analysts' earnings forecasts impound significant industry-wide news (Piotroski and Roulstone 2004; Hui and Yeung 2012), greater analyst following should increase the efficiency of prices in incorporating industry-wide information. Figures 3D presents hedge portfolio returns by quintile sorted on the number of analysts following the firm. Consistent with our expectation, we observe that hedge portfolio returns generally decrease with analyst following.

Overall, the results from our cross-sectional analyses indicate that future returns from our industry-wide earnings trading strategy vary predictably with transaction/arbitrage costs and firms' information environment with respect to industry-wide news.

SIC- and NAICS-based industry classifications

Our primary analyses focus on GICS industry classifications. We examine the sensitivity of our main results to alternative industry definitions, namely, the SIC and

NAICS classification systems. If GICS better groups firms for capital market research, we expect that hedge portfolio returns based on the alternative industry classifications will be smaller than those based on GICS industry classification.

We replicate the one-year-ahead hedge portfolio returns (CAR_{t+1}) reported in column (1) of Table 4 for four-digit historical SIC industries and six-digit NAICS industries. Specifically, we first construct a sample of 21,452 observations following the same sample selection procedure outlined above except for using four-digit SIC codes to define industries. Untabulated results show that the hedge portfolio return is 13.9% (t = 8.37), which is 80% of the hedge portfolio return based on the eight-digit historical GICS industries. We take the same approach to construct a sample of 22,873 observations using six-digit historical NAICS codes to define industries. The hedge portfolio return in this analysis is only 11.0% (t = 6.59), which is 64% of the return based on the eight-digit GICS industries.

VI. CONCLUSION

The extensive literature on accounting-based market anomalies examines how quickly and accurately investors assess the valuation implications of information in financial reports. These analyses are typically based on within-firm assessments of the properties of accounting constructs such as earnings, cash flows, and accruals. This paper contributes to the literature by examining whether investors fully understand how inter-firm industry fundamentals affect the properties of these accounting constructs.

Economic theory suggests that the industry-wide component of firm performance is more persistent than the firm-specific component. We predict that investors will not fully understand the differential persistence attributable to industry fundamentals, and thus overweight (underweight) the firm-specific (industry-wide) component of earnings in forming future earnings expectations. When earnings with a large industry-wide

component are subsequently revealed to be more persistent than earnings driven by firm-specific performance, investors are systematically surprised, leading to predictable future stock returns.

To test our predictions, we group firms into industries using the Global Industry Classification Standard (GICS) and parse reported earnings into an industry-wide component, equal to the average earnings of all firms in the industry, and a firm-specific component, equal to the residual. As expected, we find a significant positive association between industry-wide earnings and future stock returns. A hedge portfolio trading strategy taking a long (short) position in the highest (lowest) decile of industry-wide earnings generates a 17.3% abnormal return in the first year after portfolio formation (before transaction costs) and a 7.1% abnormal return in the second year. We show that these findings are robust to a number of sensitivity checks. The results are weaker, however, using alternative industry classifications, indicating the importance of an appropriate classification schema in capturing industry fundamentals.

We further examine whether our results demonstrate a form of mispricing distinct from the accrual anomaly documented by Sloan (1996). He shows that earnings performance attributable to the accrual component is less persistent than earnings performance attributable to cash flows. We therefore do a two-way sort of our sample by both the level of industry-wide earnings and the level of accruals. We find evidence that industry-wide earnings are mispriced within each of the accrual portfolios. Moreover, consistent with both industry fundamentals and accounting attributes contributing to mispricing, we find that future stock returns are highest for firms with high industry-wide earnings and low accruals and lowest for firms with low industry-wide earnings and high accruals. The hedge portfolio return to this joint trading is almost additive of the return to the two strategies considered in isolation, suggesting that neither strategy is subsumed by the other.

As an alternative approach to jointly considering the effects of industry fundamentals and accounting attributes, we decompose industry-wide and firm-specific earnings into their respective cash flow and accrual components. We predict that industry-wide cash flow is the most persistent component of earnings while firm-specific accruals is the least persistent. Consistent with investors not fully understanding the differential persistence earnings components driven by both industry and accounting forces, we find significant underreaction (overreaction) to industry-wide cash flows (firm-specific accruals). In contrast, industry-wide accruals and firm-specific cash flows have equal persistence and are not mispriced by the market. These latter results suggest that investors do not systematically overweight all accruals, but rather only that component related to firm-specific performance.

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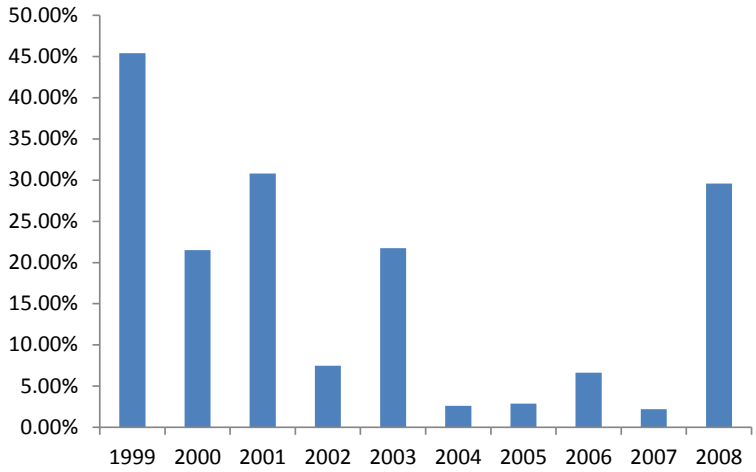
FIGURE 1
Hedge Portfolio Returns by Year



This figure presents the return by calendar year to a hedge portfolio (before transaction) taking a long position in the stock of firms in the highest decile of industry-wide earnings (*IndE*) and a short position in the stock of firms in the lowest decile of industry-wide earnings. Returns are cumulated over a one-year period beginning four months after the fiscal year end. Industry-wide earnings (*IndE*) for a firm are defined as the average of earnings before extraordinary items deflated by average assets across all firms in the same six-digit GICS industry.

Figure 2A
Average Earnings for Firms in the Top and Bottom Deciles of Industry-Wide Earnings

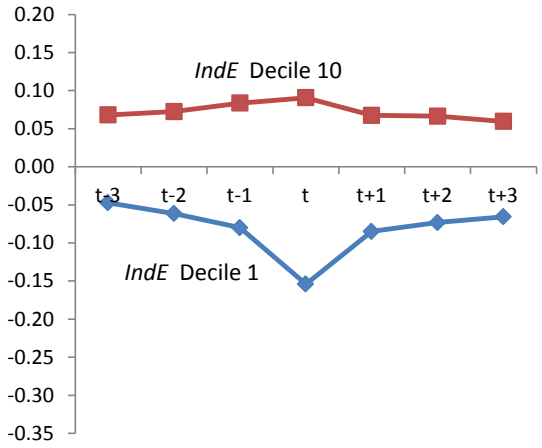


Figure 2B
Average Earnings for Firms in the Top and Bottom Deciles of Firm-Specific Earnings

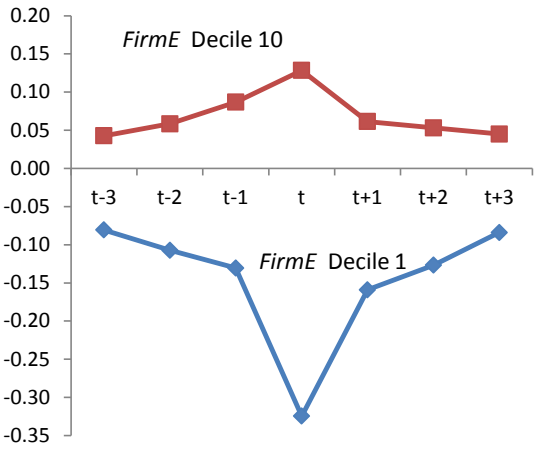


Figure 2A presents the average earnings for firms in the top and bottom deciles of industry-wide earnings (*IndE*) of year t. Earnings is the income before extraordinary items for year *t* deflated by average assets. Industry-wide earnings (*IndE*) for a firm are defined as the average of earnings before extraordinary items deflated by average assets across all firms in the same six-digit GICS industry. Figure 2B presents the average earnings for firms in the top and bottom deciles of firm-specific earnings (*FirmE*) of year t.

FIGURE 3A: Average One-Year-Ahead Hedge Returns for Quintiles of the Inverse of Trading Volume

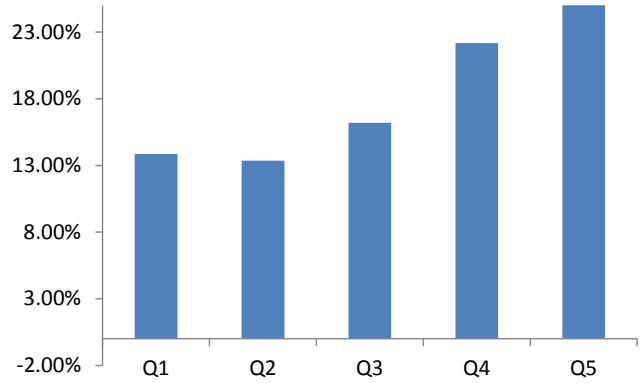


FIGURE 3B: Average One-Year-Ahead Hedge Returns for Quintiles of the Inverse of Stock Price

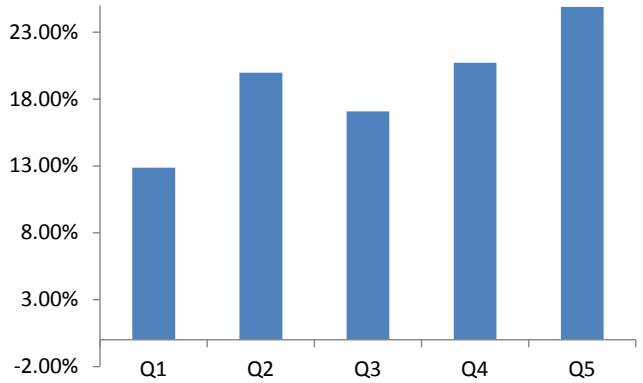


FIGURE 3C: Average One-Year-Ahead Hedge Returns for Quintiles of Arbitrage Risk

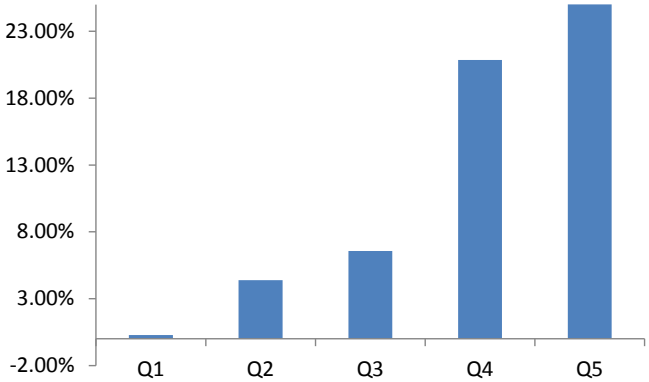
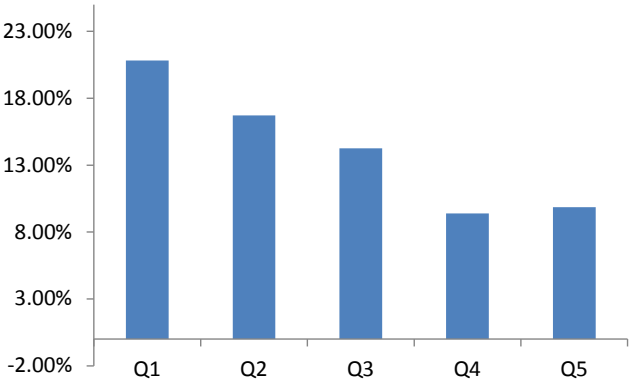


FIGURE 3D: Average One-Year-Ahead Hedge Returns for Quintiles of Analyst Following



Figures 3A to 3D present presents the return by yearly quintile of proxies for transaction costs and information environment to a hedge portfolio (before transaction costs) taking a long position in the stock of firms in the highest yearly decile of industry-wide earnings and an equal-sized short position in the stock of firms in the lowest yearly decile of industry-wide earnings. Returns are cumulated over a one year period beginning four months after the fiscal year end. Industry-wide earnings (*IndE*) for a firm are defined as the average of earnings before extraordinary items deflated by average assets across all firms in the same eight-digit GICS industry.

TABLE 1
Sample Description

Panel A. Number of Firms per Year

Year	Number of Firms	% of Sample
1999	2,404	11.66%
2000	2,121	10.28%
2001	2,049	9.93%
2002	1,787	8.66%
2003	2,175	10.55%
2004	2,207	10.70%
2005	2,166	10.50%
2006	2,121	10.28%
2007	2,096	10.16%
2008	1,499	7.27%
Total	20,625	100%

Panel B: Number of Firms by Size Decile

NYSE Size Decile	Number of Firms	% of Total Firms
1	828	4.01%
2	1,216	5.90%
3	1,979	9.60%
4	2,464	11.95%
5	2,829	13.72%
6	2,752	13.34%
7	2,583	12.52%
8	2,176	10.55%
9	2,090	10.13%
10	1,708	8.28%
Total	20,625	100%

Panel C: Industry Composition

Two-digit GICS code	Industry sector name	No. of firm-years	% of sample	% of CRSP & Compustat
10	Energy	1,863	9.03	7.11
15	Materials	1,625	7.88	7.13
20	Industrials	3,672	17.80	15.50
25	Consumer Discretionary	3,586	17.39	18.65
30	Consumer Staples	855	4.15	4.92
35	Health Care	3,198	15.51	16.27
45	Information Technology	4,301	20.85	24.81
50	Telecommunication Services	553	2.68	2.96
55	Utilities	972	4.71	2.64
Total		20,625	100.00	100.00

Panel A shows the number of (non-financial) firms in our sample across years. Panel B shows the distribution of sample firms across NYSE size deciles. The threshold values for NYSE size deciles are based on beginning-of-year market capitalization for all NYSE firms. Panel C shows the distribution of firms in our sample and in the CRSP & Compustat population across the two-digit GICS industry groups.

TABLE 2
Descriptive Statistics

	Mean	Std	P10	Q1	Median	Q3	P90
$Earn_t$	0.014	0.152	–0.121	0.005	0.043	0.084	0.130
$IndE_t$	0.014	0.075	–0.061	0.002	0.032	0.056	0.072
$FirmE_t$	0.000	0.132	–0.099	–0.028	0.009	0.056	0.117
MV_t	2328	4571	88	224	634	2006	6204
BM_t	0.514	0.344	0.155	0.266	0.439	0.669	0.976
$SalesG_t$	0.273	0.493	–0.016	0.052	0.143	0.302	0.599
$IndMom_t$	0.066	0.223	–0.261	–0.116	0.029	0.265	0.400
$FMom_t$	–0.000	0.456	–0.631	–0.391	0.000	0.395	0.632
NOA_t	0.683	0.415	0.239	0.479	0.663	0.827	1.033
$Price_t$	24.34	18.15	6.95	10.64	19.00	32.60	48.48
$Arbitrage_t$	0.134	0.067	0.067	0.088	0.118	0.164	0.222
$Earn_{t+1}$	0.035	0.110	–0.053	0.014	0.047	0.087	0.130
CAR_{t+1}	–0.006	0.508	–0.521	–0.297	–0.057	0.205	0.531
CAR_{t+2}	0.002	0.538	–0.540	–0.302	–0.058	0.202	0.551
CAR_{t+3}	0.022	0.574	–0.515	–0.283	–0.048	0.207	0.559

$\boldsymbol{Earn_t}$ is earnings for year t, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{IndE_t}$ is industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{FirmE_t}$ is the difference between $Earn_t$ and $IndE_t$. $\boldsymbol{MV_t}$ is the market value of equity at the end of year t. $\boldsymbol{BM_t}$ is the ratio of book value plus deferred tax to market value at the end of year t. $\boldsymbol{SalesG_t}$ is the average sales growth from year t-2 to year t. $\boldsymbol{IndMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t, averaged across sample firms within the same eight-digit GICS industry. $\boldsymbol{FMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t. $\boldsymbol{NOA_t}$ is the net operating asset deflated by lagged total assets in at the end of fiscal year t. $\boldsymbol{Price_t}$ is the stock price per share at the end of year t. $\boldsymbol{Arbitrage_t}$ is the arbitrage cost, measured as the standard deviation of residuals from market model in the 48 months before the end of year t. $\boldsymbol{Earn_{t+1}}$ (available for a subset of our sample)is *Earn* for year t+1. $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. $\boldsymbol{CAR_{t+2}}$ (available for a subset of our sample) is abnormal return for year t+2, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t+1. $\boldsymbol{CAR_{t+3}}$ (available for a subset of our sample) is abnormal return for year t+3, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t+2.

TABLE 3
Descriptive Statistics by Decile Portfolios of Industry-Wide Earnings

Panel A. Average Earnings By Industry-Wide Earnings Decile

$IndE_t$ Decile	N	$IndE_t$
Low	2,176	–0.154
2	2,163	–0.025
3	1,996	–0.003
4	2,081	0.014
5	2,024	0.027
6	2,128	0.038
7	1,953	0.047
8	2,121	0.056
9	2,005	0.067
High	1,978	0.091

Panel B. Selected Firm Characteristics By Industry-Wide Earnings Decile

$IndE_t$ Decile	MV_t	BM_t	$IndMom_t$	$FMom_t$	$Price_t$	$SalesG_t$	$Arbitrage_t$
Low	2,052	0.361	0.078	0.000	21.35	0.705	0.186
2	1,873	0.437	0.091	0.011	21.68	0.296	0.163
3	1,962	0.459	0.051	–0.022	22.65	0.295	0.148
4	2,439	0.539	0.053	0.000	23.09	0.221	0.129
5	2,529	0.547	0.079	–0.009	25.17	0.211	0.127
6	2,545	0.574	0.065	–0.001	25.58	0.186	0.111
7	2,270	0.588	0.060	0.006	25.04	0.200	0.117
8	2,473	0.573	0.064	0.013	26.50	0.173	0.115
9	2,346	0.534	0.060	0.001	25.57	0.202	0.119
High	2,829	0.534	0.053	–0.003	27.07	0.216	0.124
Pearson Correlation with $IndE_t$	**0.05**	**0.19**	0.03	0.00	**0.08**	**–0.36**	**–0.41**

This table presents firm characteristics by industry-wide earnings deciles. Deciles are created at the industry-level within each year. $\boldsymbol{IndE_t}$ is industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{Earn_t}$ is earnings for year t, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{FirmE_t}$ is the difference between $Earn_t$ and $IndE_t$. $\boldsymbol{MV_t}$ is the market value of equity at the end of year t. $\boldsymbol{BM_t}$ is the ratio of book value plus deferred tax to market value at the end of year t. $\boldsymbol{IndMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t, averaged across sample firms within the same eight-digit GICS industry. $\boldsymbol{FMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t. $\boldsymbol{Price_t}$ is the stock price per share at the end of year t. $\boldsymbol{SalesG_t}$ is the average sales growth from year t-2 to year t. $\boldsymbol{Arbitrage_t}$ is the arbitrage cost, measured as the standard deviation of residuals from market model in the 48 months before the end of year t. **Bold** figures indicate statistical significance at two-tailed 5%.

TABLE 4
Future Stock Returns by Decile Portfolios of Industry-Wide Earnings

$IndE_t$ Decile	(1) CAR_{t+1}	(2) CAR_{t+2}	(3) CAR_{t+3}
Low	–0.112	–0.042	0.024
2	–0.089	–0.027	–0.071
3	–0.029	–0.024	0.021
4	–0.012	–0.003	0.040
5	–0.003	0.002	0.037
6	0.017	0.018	0.066
7	0.028	0.024	0.0427
8	0.040	0.016	0.014
9	0.054	0.025	0.007
High	0.061	0.029	0.056
High – Low	0.173***	0.071***	0.032
	(9.96)	(3.48)	(1.32)
N	20,625	18,922	16,089

$\boldsymbol{IndE_t}$ is industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{Earn_t}$ is earnings for year t, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{FirmE_t}$ is the difference between $Earn_t$ and $IndE_t$. $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. $\boldsymbol{CAR_{t+2}}$ is abnormal return for year t+2, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t+1. $\boldsymbol{CAR_{t+3}}$ is abnormal return for year t+3, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t+2.

*, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively.

TABLE 5
Pricing of Industry-Wide Earnings and Firm-Specific Earnings

Panel A: Baseline regressions

	(1) Forecasting Equation $Earn_{t+1}$	(2) Return Equation CAR_{t+1}	χ^2 Test	Error in Returns
Multiple		1.345***		
		(10.61)		
Intercept	0.008***	–0.031***		
	(1.77)	(–3.34)		
$Earn_t$	0.702***	0.736***	1.71 (p = 0.19)	Insignificant
	(32.47)	(6.36)		
Observations	18,739	18,739		
Adj. R^2	47.62%	4.69%		

Panel B: Mispricing of industry-wide and firm-specific earnings

	(1) Forecasting Equation $Earn_{t+1}$	(2) Return Equation CAR_{t+1}	χ^2 Test	Error in Returns
Multiple		1.334***		
		(9.22)		
Intercept	0.006**	–0.030*		
	(1.41)	(–1.70)		
$IndE_t$	0.840***	0.673***	13.70 (p < 0.01)	Under-
	(32.04)	(4.01)		
$FirmE_t$	0.652***	0.757***	13.15 (p < 0.01)	Over-
	(30.93)	(5.71)		
Observations	18,739	18,739		
Adj. R^2	48.58%	4.71%		
F-Tests:				
$IndE_t = FirmE_t$	p < 0.01	p = 0.67		

This table presents the results of Mishkin test of whether stock prices behave as if investors underreact to industry-wide earnings. In columns (3) and (4), we present the results of the following two regressions:

$$Earn_{t+1} = a_0 + a_1 IndE_t + a_2 FirmE_t + \varepsilon_{1t}$$

$$CAR_{t+1} = Multiple \times (Earn_{t+1} - a_0 - a_1 IndE_t - a_2 FirmE_t) + \varepsilon_{2t}$$

$\boldsymbol{Earn_t}$ is earnings for year t, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{Earn_{t+1}}$ is *Earn* for year t+1. $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. $\boldsymbol{IndE_t}$ is industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{FirmE_t}$ is the difference between $Earn_t$ and $IndE_t$. ***Multiple*** is the earnings multiple implicated in the stock returns.

*, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively. All t-statistics are based on firm and year double clustered standard errors.

TABLE 6
Regressions of Future Abnormal Stock Returns

	Size-adjust Returns		Three-Factor adjusted Returns	
	(1)	(2)	(3)	(4)
	CAR_{t+1}	CAR_{t+2}	$CAR3f_{t+1}$	$CAR3f_{t+2}$
Intercept	–0.025	–0.042	–0.020	-0.046
	(–0.19)	(–0.29)	(-0.18)	(-0.38)
$IndE10_t$	0.101***	0.051**	0.062***	0.041*
	(4.36)	(2.28)	(2.85)	(1.88)
$PAcc10_t$	–0.049**	–0.039**	–0.025	-0.028
	(–2.17)	(–1.99)	(–1.23)	(-1.33)
$NOA10_t$	–0.033**	–0.020	–0.029**	-0.005
	(–1.98)	(–1.46)	(–2.11)	(-0.39)
$Log(MV)_{t\ or\ t+1}$	0.002	0.004	0.006	0.008
	(0.17)	(0.35)	(0.77)	(0.88)
$BM_{t\ or\ t+1}$	0.139***	0.130***	0.172**	0.161***
	(2.94)	(2.87)	(2.44)	(2.25)
$IndMom_{t\ or\ t+1}$	0.167*	0.197***	0.117	0.145***
	(1.78)	(2.32)	(0.53)	(0.63)
$FMom_{t\ or\ t+1}$	–0.011*	–0.007	0.002	0.007
	(–1.73)	(–0.67)	(0.25)	(0.81)
$Arbitrage_{t\ or\ t+1}$	–0.572*	–0.473	–0.856*	–0.772
	(–1.69)	(–1.35)	(–1.72)	(–1.32)
$SalesG_{t\ or\ t+1}$	–0.031	–0.008	–0.028	–0.003
	(–1.62)	(–0.85)	(–1.02)	(–0.12)
Observations	20,625	18,922	20,625	18,922
Adj. R^2	3.54%	2.52%	3.73%	2.83%

This table presents results of multiple regressions of one-year-ahead abnormal stock returns ($\boldsymbol{CAR_{t+1}}$ and $\boldsymbol{CAR3f_{t+1}}$). $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. $\boldsymbol{CAR3f_{t+1}}$ is the GDTW three-factor (size, book-to-market, and momentum) adjusted abnormal return. $\boldsymbol{CAR_{t+2}}$ and $\boldsymbol{CAR3f_{t+2}}$ are abnormal return for year t+2, defined as the size- or three-factor adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t+1. $\boldsymbol{IndE10_t}$ is decile ranked (converted to [0, 1]) industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{PAcc10_t}$ is decile ranked (converted to [0, 1]) percent operating accruals for year t, defined as net income minus operating cash flows deflated by absolute value of net income. $\boldsymbol{NOA10_t}$ is decile ranked (converted to [0, 1]) net operating asset deflated by lagged total assets in at the end of fiscal year t. $\boldsymbol{MV_t}$ is the market value of equity at the end of year t. $\boldsymbol{BM_t}$ is the ratio of book value plus deferred tax to market value at the end of year t. $\boldsymbol{IndMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t, averaged across sample firms within the same eight-digit GICS industry. $\boldsymbol{FMom_t}$ is the six-month size-adjusted buy-and-hold stock return ending the third month after the end of fiscal year t. $\boldsymbol{Arbitrage_t}$ is the arbitrage cost, measured as the standard deviation of residuals from market model in the 48 months before the end of year t. $\boldsymbol{SalesG_t}$ is the average sales growth from year t-2 to year t.
*, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively. All t-statistics are based on firm and year double clustered standard errors.

Table 7
Relation between Return Predictability by Industry-wide Earnings and by Accruals

Panel A: Average Abnormal Stock Returns (n = 20,625)

IndE Quintiles	Average CAR_{t+1}	*PAcc* Quintiles	Average CAR_{t+1}
Q1	–0.100	Q5	–0.052
Q2	–0.020	Q4	–0.007
Q3	0.007	Q3	–0.019
Q4	0.036	Q2	0.033
Q5	0.056	Q1	0.019
Q5-Q1	0.156***	Q1-Q5	0.071***
	(13.067)		(5.97)

Panel B: Average Abnormal Stock Returns for Portfolios by both *IndE* and *PAcc* (n = 20,625)

IndE Quintiles	*PAcc* Quintiles					
	Q5	Q4	Q3	Q2	Q1	Q1-Q5
Q1	–0.158	–0.097	–0.125	–0.049	–0.039	0.119***
						(4.13)
Q2	–0.047	–0.048	–0.042	0.009	0.016	0.063**
						(2.33)
Q3	–0.058	0.031	–0.016	0.048	0.019	0.077***
						(3.16)
Q4	–0.005	0.014	0.054	0.067	0.038	0.043*
						(1.75)
Q5	0.034	0.073	0.033	0.082	0.068	0.034
						(1.27)
Q5-Q1	0.192***	0.170***	0.158***	0.121***	0.107**	
	(8.04)	(7.10)	(7.32)	(4.82)	(3.27)	

Panel A presents average one-year-ahead stock returns (CAR_{t+1}) for quintile portfolios sorted on industry-wide earnings (*IndE*) and accruals (*PAcc*). *IndE* quintiles are created at the industry-level within each year. *Acc* quintiles are created within each year. $\boldsymbol{IndE_t}$ is industry-wide earnings for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms within the same eight-digit GICS industry. $\boldsymbol{PAcc_t}$ is percent operating accruals for year t, defined as net income minus operating cash flows deflated by absolute value of net income. $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. Panel B presents average one-year-ahead stock returns (CAR_{t+1}) for 25 portfolios sorted on both industry-wide earnings (*IndE*) and accruals (*Acc*).
*, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively.

TABLE 8
Descriptive Statistics of Cash Flows and Accruals

Panel A: Descriptive Statistics (*n* = 18,739)

	Mean	Std	P10	Q1	Median	Q3	P90
CF_t	0.093	0.107	–0.004	0.052	0.096	0.149	0.207
$IndCF_t$	0.083	0.060	0.030	0.060	0.089	0.116	0.147
$FirmCF_t$	0.009	0.094	–0.081	–0.034	0.007	0.056	0.116
Acc_t	–0.054	0.075	–0.137	–0.087	–0.050	–0.018	0.022
$IndAcc_t$	–0.055	0.033	–0.098	–0.073	–0.052	–0.034	–0.019
$FirmAcc_t$	0.001	0.068	–0.071	–0.030	0.002	0.033	0.073

Panel B: Univariate Correlations (*n* = 18,739)

	$IndCF_t$	$FirmCF_t$	Acc_t	$IndAcc_t$	$FirmAcc_t$
CF_t	**0.532**	**0.847**	**–0.206**	–0.022	**–0.217**
$IndCF_t$		0.001	–0.020	**–0.048**	0.001
$FirmCF_t$			**–0.230**	0.004	**–0.256**
Acc_t				**0.424**	**0.905**
$IndAcc_t$					-0.003

Panel A presents descriptive statistics of components of earnings. $\boldsymbol{CF_t}$ is operating cash flows for year *t*, defined as net cash flow from operating activities less the accrual portion of extraordinary items and discontinued operations reported on the statement of cash flows, deflated by average assets. $\boldsymbol{Acc_t}$ is the total operating accruals for year *t*, defined as $Earn_t$ minus CF_t. $\boldsymbol{IndCF_t}$ is industry-wide cash flows for year *t*, defined as the average of CF_t across sample firms within the same eight-digit GICS industry. $\boldsymbol{FirmCF_t}$ is firm-specific cash flows for year *t*, defined as CF_t minus $IndCF_t$. $\boldsymbol{IndAcc_t}$ is industry-wide accruals for year *t*, defined as the average of Acc_t of sample firms in the same eight-digit GICS industry. $\boldsymbol{FirmAcc_t}$ is defined as Acc_t minus the sum of $IndAcc_t$. Panel B presents Pearson correlations among variable of interests. $\boldsymbol{Earn_t}$ is earnings for year *t*, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{Earn_{t+1}}$ is earnings for year t+1, defined as income before extraordinary items, deflated by average assets. $\boldsymbol{CAR_{t+1}}$ is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. **Bold** figures in Panel B indicate statistical significance at the two-tailed 5% level.

TABLE 9
Errors in Implied Persistence of Earnings Components

Panel A: Mispricing of cash flows and accruals (*n* = 18,739)

	Forecasting Equation $Earn_{t+1}$	Return Equation CAR_{t+1}	χ^2 Test	Error in Returns
Multiple		1.325***		
		(10.55)		
Intercept	–0.007***	–0.032		
	(–1.66)	(–4.64)		
CF_t	0.776***	0.720***	3.89 ($p = 0.05$)	Under-
	(49.56)	(5.35)		
Acc_t	0.558***	0.703***	12.87 ($p < 0.01$)	Over-
	(27.18)	(8.53)		
F-Test: $CF_t = Acc_t$	($p < 0.01$)	$p = 0.83$		

Panel B: Mispricing of industry-wide and firm-specific cash flows and accruals (*n* = 18,739)

	Forecasting Equation $Earn_{t+1}$	Return Equation CAR_{t+1}	χ^2 Test	Error in Returns
Multiple		1.318***		
		(10.33)		
Intercept	–0.004**	–0.024*		
	(–0.70)	(–1.66)		
$IndCF_t$	0.887***	0.634***	25.35 ($p < 0.01$)	Under-
	(37.53)	(2.22)		
$FirmCF_t$	0.731***	0.752***	0.42 ($p = 0.52$)	Insignificant
	(47.09)	(6.86)		
$IndAcc_t$	0.770***	0.738***	0.13 ($p = 0.71$)	Insignificant
	(18.44)	(3.04)		
$FirmAcc_t$	0.498***	0.703***	20.36 ($p < 0.01$)	Over-
	(24.19)	(10.50)		
F-Tests:				
$IndCF_t = FirmCF_t$	$p < 0.01$	$p = 0.60$		
$FirmCF_t = IndAcc_t$	$p = 0.33$	$p = 0.93$		
$IndAcc_t = FirmAcc_t$	$p < 0.01$	$p = 0.87$		

This table presents Mishkin generalized least square regression results. In panel A, the models estimated are:

$$Earn_{t+1} = a_0 + a_1 CF_t + a_2 Acc_t + e_{t+1}$$

$$CAR_{t+1} = Multiple \times (Earn_{t+1} - a_0 - a_1 CF_t - a_2 Acc_t) + \varepsilon_{t+1}$$

In panel B, the models estimated are:

$$Earn_{t+1} = c_0 + c_1 IndCF_t + c_2 FirmCF_t + c_3 IndAcc_t + c_4 FirmAcc_t + \varepsilon_{5t+1}$$

$$CAR_{t+1} = Multiple \times (Earn_{t+1} - \gamma_0 - \gamma_1 IndCF_t - \gamma_2 FirmCF_t - \gamma_3 IndAcc_t - \gamma_4 FirmAcc_t) + \varepsilon_{6t+1}$$

Multiple is the earnings multiple implied in stock prices. ***$Earn_{t+1}$*** is earnings for year t+1, defined as income before extraordinary items, deflated by average assets. ***CAR_{t+1}*** is abnormal return for year t+1, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. ***CF_t*** is operating cash flows for year *t*, defined as net cash flow from operating activities less the accrual portion of extraordinary items and discontinued operations reported on the statement of cash flows, deflated by average total assets. ***Acc_t*** is the total operating accruals for year t, defined as $Earn_t$ minus CF_t. ***$IndCF_t$*** is industry-wide cash flows for year t, defined as the average of income before extraordinary items (deflated by average assets) across sample firms in the same eight-digit GICS industry. ***$FirmCF_t$*** is firm-specific cash flows for year t, defined as CF_t minus $IndCF_t$. ***$IndAcc_t$*** is industry-wide accruals for year t, defined as the average of Acc_t of all firms in an industry.*, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively. All t-statistics are based on firm and year double clustered standard errors.

TABLE 10
Industry-Wide Earnings and Stock Returns Across Industry Sectors

Panel A. Percentage of Firms across Industry-Wide Earnings Decile within Each Industry Sector

	Industry-Wide Earnings Deciles									
Industry Sectors	1	2	3	4	5	6	7	8	9	10
Energy	1.13	5.90	7.51	14.98	7.35	10.31	9.29	11.92	15.03	16.59
Materials	9.42	4.92	11.57	12.00	15.32	9.91	10.52	10.65	7.02	8.68
Industrials	2.59	4.03	5.42	6.89	8.22	11.27	16.09	25.60	12.34	7.54
Consumer Discretionary	4.38	4.02	8.64	6.94	6.61	8.23	12.35	9.40	15.48	23.95
Consumer Staples	3.51	4.56	3.63	2.46	7.49	7.49	11.81	13.80	24.68	20.58
Health Care	37.09	13.10	11.44	5.85	8.79	9.79	1.88	4.91	5.57	1.59
Information Technology	11.46	26.41	15.28	12.74	11.88	4.84	5.53	3.05	4.98	3.84
Telecommunication	5.79	8.86	16.09	19.89	4.88	27.67	13.56	3.25	0.00	0.00
Utilities	0.93	3.91	1.65	24.59	22.22	33.74	10.39	2.57	0.00	0.00

Panel B: Hedge Return (CAR_{t+1}) for Quintile Portfolios Sorted on Persistence of Industry-wide Earnings

Extreme *IndE* Deciles	Quintiles on Persistence of Industry-wide Earnings				
	Q1	Q2	Q3	Q4	Q5
Low	-0.027	-0.114	-0.084	-0.130	0.256
High	0.016	0.010	0.084	0.089	0.072
High - Low	0.043	0.124***	0.168***	0.219***	0.328***
	(0.86)	(3.78)	(4.17)	(6.50)	(6.83)

Panel A presents the percentage of firms across major GICS industry sectors within each decile portfolio of industry-wide earnings ($IndE_t$). $\boldsymbol{Earn_t}$ is earnings for year t, defined as income before extraordinary items, deflated by average assets. Panel B presents the hedge portfolio stock returns across quintile portfolios sorted on the persistence of industry-wide earnings. Persistence of industry-wide earnings is estimated from the regression that predicts total earnings of current year using lagged industry-wide earnings. We run this regression at eight-digit GICS level with prior ten-year data. *, **, and *** indicate statistical significance at the two-tailed 10%, 5%, and 1%, respectively.