

Why Are Investors Paying More Attention to Free Cash Flows?[¥]

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Abstract

We document an upward trend in investor responsiveness to free cash flow surprises over time. We investigate whether this trend reflects an increase in the information content of free cash flow for all firms, a shift in the composition of firms toward those for which free cash flow is particularly value-relevant, or a correction of previous market underreaction to free cash flow news. We also examine the relation between the market reaction and the firm's decision to disclose free cash flows. Consistent with a shift in firm composition, we find that the market response is especially strong for newer firms with high levels of intangible assets. Controlling for changing firm composition, we also find evidence of a general increase in the information content of free cash flow for all firms. The market response is incrementally associated with a firm's decision to disclose free cash flow. We find no evidence that the increase in responsiveness reflects a correction of prior underweighting of this performance metric.

[¥] Preliminary and incomplete. Comments very welcome.

1. Introduction

One of the central questions in finance is the extent to which security prices reflect information. Although free cash flow has long been touted as fundamental to valuation and thus price formation, little evidence exists as to how market participants respond to the information in free cash flow. We address this gap in the literature.

Our research begins with the observation that the stock market response to innovations in free cash flow (the free cash flow response coefficient, or *FRC*) has increased steadily over time.¹ Why are investors paying more attention to free cash flow news? One potential explanation is that the information content of free cash flow is increasing for all firms. It may also be the case that free cash flow is more value-relevant for some types of firms, and over time the composition of firms in the market has shifted to more free cash flow-relevant firms. For example, Srivastava (2014) shows that the decline in earnings quality over time is consistent with a shift toward firms in knowledge-intensive industries with high intangible assets; if free cash flow is relatively more important for these firms, we would expect to see *FRCs* increasing. Finally, Sloan (1996a) argues that investors place too much emphasis on reported earnings and fail to react to the incremental information in free cash flows. Holding constant the information content of firm free cash flows, it may be that investors previously underreacted to the information in free cash flows and that their reaction is becoming more efficient.

We first examine the market reaction to free cash flow innovations. Our results show that earnings announcement returns are significantly associated with simple free cash flow surprises. The magnitude of this response is roughly equal to that of the response to earnings surprises when

¹ See Figure 1. We define *FRC* more specifically in Section 4.

both surprises are included in the regression, suggesting free cash flow contains information that is incremental to earnings news. Although free cash flow is fundamental to valuation, to our knowledge we are the first to document a market reaction to free cash flow news.

As noted above, we next document that the market response to free cash flow news has been increasing over time. One potential reason is that the composition of firms in the market has shifted over time toward firms for which free cash flow is more value relevant. To test this prediction, we conduct two separate analyses. First, we sort firms into cohorts based on the age of the firm. Our results show that the *FRC* is larger for newer firms. We also sort firms into subsamples based on the fraction of their assets which are intangible and find that *FRCs* are significantly larger for firms with more intangible assets. To the extent that the fraction of newer firms with high levels of intangible assets is increasing over time, the trend we observe in *FRCs* is at least partially attributable to the changing composition of firms in the market. We continue, however, to document an increase in the *FRC* for the rest of the sample, and thus the increase in *FRCs* also reflects either an overall increase in the information content of free cash flow or a change in the efficiency with which investors incorporate free cash flows.

To examine whether the trend in *FRCs* reflects changes in the efficiency of the market reaction, we examine long-run returns. We find little evidence of a relation between free cash flow news and long-run returns. These results hold for the full sample and for subsamples for which we expect free cash flow news to be particularly relevant (e.g., newer firms with high levels of intangible assets). We also find no evidence that this relation has changed over time. Therefore, our conclusion is that the time trend in *FRCs* does not result from changes in the efficiency of the market reaction.

Prior research shows that more managers are voluntarily disclosing free cash flow in their earnings announcements [Adame, Koski, and McVay (2019)]. We explore the relation between the disclosure decision and the market reaction to free cash flows. Results show that the market reacts more strongly to free cash flow news when the amount is explicitly disclosed in the earnings announcement. The market also reacts incrementally to cross-sectional variations in the definition of free cash flow that managers choose to disclose. From these results, we conclude that there is information in free cash flow itself, in the decision to disclose free cash flow, and in the choice of definition to disclose.

Overall, our conclusion is that the increase in *FRCs* over time reflects a combination of an increase in the information content of free cash flow for all firms and a shift in the composition of firms toward those for which free cash flow is particularly value relevant. We find no evidence that this trend in *FRCs* reflects a correction of market mispricing.

Collectively, our results suggest that free cash flow may be increasingly important for market participants going forward. By demonstrating that market participants respond incrementally to information in free cash flow and its disclosure, our research contributes to the literature on the information content of both free cash flow and firms' disclosure choices. Extensive prior research documents that stock prices incorporate information in earnings [e.g., Ball and Brown (1968); Kormendi and Lipe (1987)]. We provide evidence that free cash flow offers incremental information to earnings.

The remainder of this paper is organized as follows. In Section 2, we discuss our theoretical predictions and related literature. In Section 3, we describe our sample. We describe our methodology in Section 4 and present results in Section 5. In Section 6, we conclude.

2. Theory

The market response to free cash flow news has been increasing over time. In this paper we examine potential reasons why. Our initial explanation is that free cash flows are becoming more important for all firms. We explore several alternatives to this starting point. First, it is possible that there has been a shift in the underlying population of firms over time and that free cash flow is more relevant for newer firms. In the spirit of Fama and French (2004), to test this prediction we sort our sample of firms into different cohorts based on the age of the firm. Seasoned firms listed before 1990 are included in *Cohort 1*, and newer firms listed in 1990 or later are included in *Cohort 2*.² To the extent that the time trend in the market's response to free cash flow surprises is attributable to changing firm composition, we expect that *FRCs* will be larger for newer firms (*Cohort 2*).

Corrodo and Hulten (2010), among others, note that the technological revolution has resulted in a shift of the U.S. population of firms from industrial to knowledge-based firms. As part of this shift, firms are investing more in intangible assets, and intangibles are not measured with precision under the current accounting system.³ Free cash flows may be more important relative to traditional performance metrics such as earnings for firms with substantial intangible assets. If so, *FRCs* should be larger for firms with high levels of intangible assets, and the time trend in the market's response to free cash flow surprises may reflect the shift to intangible-asset-intensive firms in more recent years.

Sloan (1996a) suggests that investors underweight free cash flows in their assessments of firm value. If the initial market reaction to free cash flow news in earnings announcements is

² More specifically, following Srivastava (2014), the "listing year" is the first year the firm's data are available on Compustat.

³ The trend toward intangible assets may or may not be related to firm age as captured in our cohort analysis. Therefore, we separately test the relation between intangible assets and *FRCs*.

efficient, there will be no long-run returns after the earnings announcements. In contrast, if the market underreacts to free cash flow news as suggested by Sloan (1996a), we would anticipate long-run abnormal returns after earnings announcements. The time trend in *FRCs* would imply that we should observe abnormal long-run returns during the earlier part of our sample period which decline or disappear in more recent years.

Prior research shows that more managers are voluntarily disclosing free cash flow in their earnings announcements [Adame, Koski, and McVay (2019)]. This decision may reflect the changing information content of free cash flow for all firms, the changing composition of firms, or the shift by more firms towards intangibles. It may also be an attempt by managers to draw investor attention to free cash flows and enhance market efficiency. For these reasons, other things equal, we expect that *FRCs* should be higher for firms that choose to disclose free cash flow in their earnings announcements relative to those that do not. We examine subsequent abnormal returns over time to assess whether the increase in free cash flow disclosure reflects a change in the informativeness of free cash flows or an attempt by managers to draw attention to this metric.

To summarize, we explore three alternative explanations for the increase in *FRCs* over time. Our null hypothesis is that free cash flow is becoming more value-relevant for all firms. Alternatively, the trend may reflect a shift in the composition of firms, which we test by examining whether the trend is concentrated in newer firms and firms with more intangible assets. Or the increase may result because the market previously underreacted to free cash flow news, but the reaction is becoming more efficient; we test this prediction using long-run returns. Finally, we examine the relation between firm disclosure of free cash flow and the market reaction.

3. Sample and Descriptive Statistics

Our sample begins with all firms listed in the Standard and Poor's [S&P] 1500 at any point during the period 2004 through 2016.⁴ We require sequential non-missing earnings announcements and non-missing CRSP and Compustat data for our analysis. The resulting sample consists of 13,992 firm-years for 1,393 unique firms. The number of firm-years in our sample ranges from a maximum of 1,336 in 2005 to 857 in 2016, see Table 1.⁵ We provide a list of variable definitions in the appendix.

In Table 1, we also report summary statistics for the various subsamples we analyze. Just over half of firm-years represent older firms (*Cohort 1*). Newer firms (*Cohort 2*) tend to leave our sample more quickly. This result reflects our focus on S&P 1500 firms. *High Intangible* firms are identified as those above the median of intangibles/assets for a given year, and thus the fraction of *High Intangible* firms does not vary over time by construction. The percentage of firm-years in which free cash flow is disclosed in a firm's earnings announcement increases from 9.1 % in 2004 to 20.3% by 2016.

In Table 2, Panel A, we present descriptive statistics for the main variables used in our analysis. Mean (median) earnings surprise, scaled by market value of equity, is 0.011 (0.001) and mean (median) free cash flow surprise, scaled by market value of equity) is 0.002 (0.001). The mean (median) three-day cumulative abnormal return around the earnings announcement is 0.005 (0.003). *Intangible Intensity* has a mean (median) of 0.187 (0.118), reflecting the importance of intangibles. *Time Trend* is the year minus 2004 (the first year of the sample) and ranges from zero

⁴ We identify S&P 1500 firms as those firms with an *SPMIM* (S&P Major Market Index Identifier) value on Compustat equal to 10 (S&P 500), 91 (S&P Midcap 400), or 92 (S&P Midcap 600). See Adame, Koski, and McVay (2019) for more details on the sample construction.

⁵ By construction there is a decline in the number of firm-years in our sample over time. We have data available for many S&P 1500 additions from the beginning of our sample period, but we lose S&P 1500 firms from our sample as they merge or are delisted.

to 12. Finally, as illustrated in Table 1, 14.1% of firm-years have a free cash flow disclosure in their annual earnings announcement.

In Table 2, Panel B, we present a correlation matrix for our sample. Earnings and free cash flow surprises are positively correlated at 0.1424 and both are positively correlated with the three-day cumulative abnormal return, consistent with a stock price reaction to information in both earnings and free cash flow. *Intangible Intensity* is positively correlated with *Cohort 2* and with the *Time Trend*. These results suggest that intangibles are higher for younger firms and that intangibles represent a larger portion of firms' assets in more recent years [e.g., Corrado et al. (2010)]. Younger firms tend to be smaller and have lower analyst following. Free cash flow disclosure is negatively correlated with *Earnings Surprise* and *Cohort 2*, and positively correlated with *Intangible Intensity* and *High Intangibles Indicator*. Overall, therefore, several of our firm characteristics are related, and we will need to consider these relations in our tests.

4. Methodology

Our main empirical approach is to relate abnormal stock returns around the earnings announcement day to the unexpected component of free cash flow (the free cash flow surprise) and, for comparison, the earnings surprise. The most popular definition of free cash flow disclosed by firms is operating cash flow minus capital expenditures. This definition also appears frequently on financial websites.⁶ We use Compustat data (OANCF – CAPX) to calculate free cash flow based on this definition, which we call *Simple FCF*, for all firm-year observations in our sample:

$$\text{Simple FCF} = \text{Operating Cash Flow} - \text{Gross Capital Expenditures} \quad (1)$$

⁶ See, for example, Investopedia (<http://www.investopedia.com/terms/f/freecashflow.asp>).

To test for the information content in free cash flow, we regress three-day cumulative abnormal returns (CAR) around the earnings announcement date on the earnings surprise and the simple free cash flow surprise,

$$CAR_i = \beta_0 + \beta_1(Earnings\ Surprise_i) + \beta_2(Simple\ FCF\ Surprise_i) + \varepsilon_i \quad (2)$$

for earnings announcement event i , where

$$CAR_i = \sum_{j=t-1}^{t+1} AR_{i,j}$$

is measured over a 3-day window around the earnings announcement day $t = 0$, and abnormal returns ($AR_{i,j}$) are computed relative to the CRSP value-weighted index. All independent variables are divided by weighted average diluted shares outstanding and scaled by beginning of period price. We decile-rank each of our independent variables by year [Bernard and Thomas (1989) and Doyle, Lundholm, and Soliman (2003)]. We estimate equation (2) for our full sample and also for subsamples based on theoretically relevant partitions of the sample as described in Section 2.

Current research typically measures earnings surprises relative to the consensus analyst forecast of earnings per share immediately before the earnings announcement [e.g., Doyle, Lundholm, and Soliman (2003)]. However, a comparable measure for free cash flow surprise based on analyst forecasts of the components of free cash flow is only available for a subset of our firms (27.6 percent). Consequently, to measure the information content of earnings and free cash flow on an equal footing, we calculate both surprises relative to expectations based on trailing-twelve-months' results (TTM) for the same figure computed as of the prior quarter end to calculate a quarterly earnings surprise. *Earnings Surprise* is therefore defined as current year earnings minus trailing-twelve-months earnings, and *Simple FCF Surprise* is defined as *Simple FCF* from equation (1) minus trailing-twelve-months simple free cash flow. The coefficient on *Earnings Surprise*

(β_1) is the well-known earnings response coefficient [*ERC*, e.g. Kormendi and Lipe (1987)]. The coefficient on *Simple FCF Surprise* (β_2) allows us to identify the market's incremental reaction to information contained in simple free cash flows. We refer to this coefficient as the free cash flow response coefficient (*FRC*).

5. Results

5.1 Full Sample

Table 3, Panel A, reports the results of the regressions in equation (2).⁸ In column 1 we confirm prior research that unexpected earnings are positively associated with earnings announcement returns on average. Column 2 reports results with *Simple FCF Surprise* as the explanatory variable. The coefficient on *Simple FCF Surprise* is significant. Explanatory power in columns 1 and 2 is also similar. Column 3 reports results of tests of equation (2). Coefficients on both earnings and free cash flow surprises are significant, similar in magnitude, and not statistically different from one another under an *F*-test (*p*-value = 0.7731). This result is consistent with Sloan (1996a), who finds that current free cash flow provides information about corporate performance that is not contained in current earnings.

Sloan (1996b) provides evidence that *within* earnings, the cash component of earnings is more reliable than the non-cash component of earnings. In Table 3, Panel B, we decompose the earnings surprise into its cash component (*OCF Surprise*) and non-cash component (*Accruals Surprise*). Our inferences are similar. The coefficient on cash from operations innovations (*OCF*

⁸ We exclude firms that disclose a free cash flow number adjusted beyond the simple definition from this analysis, because announcement returns for these firms might reflect any reaction to the individual adjustments as well as any reaction to *Simple FCF*. Therefore, the sample in these regressions includes all firm-years that disclose simple free cash flow and all non-disclosers. We examine firms disclosing free cash flows that differ from simple free cash flows in Section 5.3.

Surprise) is 0.0032, and the coefficient on free cash flow innovations is 0.0022; both coefficients are highly statistically significant.

The market's response to free cash flow surprises may vary across firms due to differences in information asymmetry. If high information asymmetry firms have higher uncertainty, earnings announcements might be differentially informative. To control for this variation, we identify two firm characteristics to use as (inverse) proxies for asymmetric information: firm size and analyst following. In both cases, higher values of the proxies are associated with lower asymmetric information. In Panel C, we re-estimate our regressions interacting earnings surprise and free cash flow surprise with these two controls. The non-interacted coefficients on *Earnings Surprise* and *Simple FCF Surprise* are higher than those reported in Panel A, and the interactions of our surprises with the inverse proxies for asymmetric information are negative (although not significant when *Simple FCF Surprise* is interacted with analyst coverage). These results are consistent with the interpretation that earnings and cash flow news is expected to be more informative to investors in firms with greater information asymmetry. Controlling for asymmetric information, we continue to find significant *FRCs*.

Collectively these results suggest that *Simple FCF Surprise* contains information that is incremental to that provided by unexpected earnings; free cash flow is not merely a redundant repackaging of the components of earnings. To our knowledge, we are the first study to document a market reaction to innovations in simple free cash flow.

In Figure 1, we graph the mean and median *FRC* by year for our sample. Results show a fairly steady upward trend in each of these time series.⁹ A regression of *FRC* on a time trend is highly significant (untabulated). Our main goal is to understand why the average *FRC* is increasing

⁹ The *FRCs* in Figure 1 are the results of estimating equation 2 separately by year.

over time. Is the information content of free cash flow increasing for all firms? Does this trend reflect changing firm characteristics, for example a shift toward newer firms and/or more intangible-intensive firms? Or does the trend reflect the increasing tendency of managers to highlight free cash flow by disclosing it in their financial statements? We next conduct tests to address these issues.

5.2 Subsample Analysis

To shed light on whether free cash flows are becoming more important over time for all firms, or whether this trend has specific drivers, in this subsection we estimate equation (2) for the subsamples of firms motivated as theoretically important in Section 2. We first examine whether the underlying population of firms has changed over time by splitting our sample into an older and newer cohort (split at 1990). We also consider whether the increase in free cash flow responses is concentrated in firms with high intangible intensity as free cash flows may be relatively more informative for these firms. Finally, we consider whether the firm's management provides a free cash flow number in the earnings announcement and how investors respond to this disclosure.

We present results for the partitions in Table 4, Panel A. We first compare age cohorts in columns 2 and 3. The *FRC* differs across the two cohorts (0.0024 and 0.0034 for *Cohort 1* and *Cohort 2*, respectively; the difference is marginally significant with a p-value of 0.1014). We explore this result further in Figure 2, Panel A. It is clear from the figure that the *FRCs* of *Cohort 2* firms are initially much higher than the *FRCs* of *Cohort 1* firms, and that over time they increase only marginally. In contrast, the *FRCs* of *Cohort 1* firms have increased over time, nearing the economic magnitude of *Cohort 2 FRCs* by the end of the sample. Thus, the marginal difference in Table 4 (p-value = 0.1014) masks a difference in time trends between the two cohorts.

Columns 4 and 5 present the results for *Low Intangibles* versus *High Intangibles*. The coefficients are highly significant in both columns, but the *FRC* for firms with high intangibles is statistically larger (p-value = 0.0114). Turning to the graph of these *FRCs* over time presented in Figure 2, Panel B, both groups of firms have *FRCs* that are increasing. In untabulated tests using a time trend, these increases are statistically significant for both groups, and the time trend term is not statistically different across the two groups (p-value 0.22).

The *FRC* is highly significant for both *Non-Disclosers* (0.0027; column 6) and *FCF Disclosers* (0.0055; column 7). This difference is both economically and statistically significant (p-value = 0.0236). Also notable is that the adjusted R^2 in column 7 is 0.0868, which is two to three times higher than the adjusted R^2 s in the other regressions. Although the difference between columns 6 and 7 is statistically significant, the time-series graph presented in Figure 2, Panel C, illustrates that the higher *FRC* for disclosers is largely driven by more recent years. Prior to 2009, free cash flow disclosers experienced a much more muted response. Perhaps this reflects investors' under-weighting of free cash flows as documented in Sloan (1996a) or perhaps this reflects a shift in the informativeness of free cash flows over time. We test for these alternative explanations below.

As was evidenced from the correlations in Table 2, there is a great deal of overlap between age cohorts, intangible intensity and free cash flow disclosure. Thus, in Panel B of Table 4 we explore further which underlying features are the most likely drivers of the higher *FRCs*. In column 1 we interact free cash flow disclosure (*FCF Discloser*) with *Simple FCF Surprise* for the full sample, and the interaction term is positive and significant, consistent with disclosure being associated with a greater market response. In the next two columns, we partition by cohort and find that the incremental responsiveness to disclosure extends only to the younger cohort (column

3); this result does not appear to be a power issue given 6.3 percent of firm-years within *Cohort 1* have free cash flow disclosures relative to 5.9 percent of firms years within *Cohort 2*. In columns 4 and 5 we partition by low and high intangible intensity and find that the incremental responsiveness to disclosure is only present in high intangible firms. In this case the number of free cash flow disclosures within *High Intangibles* is notable higher (9.6 percent) than *Low Intangibles* (2.8 percent). Finally, we partition the sample into three possible buckets: *Cohort 1/Low Intangibles* (column 6), *Cohort 2/High Intangibles* (column 7), and finally all *Others* (column 8). Although column 7 represents the lowest number of firm-year observations, it has the highest *FRC* and is also the only one of these three subsets to have a statistically significant interaction with *FCF Discloser*.

Our takeaway from this analysis is that the market response to free cash flow news is particularly concentrated in newer firms with high intangible assets. These results provide some evidence that changing firm composition contributes to the overall time trend of increasing *FRCs*.

5.3 Definition of Disclosed FCF

So far, our analysis of free cash flow disclosure has focused only on whether or not a firm discloses a free cash flow number in its earnings announcement. Among disclosers, there is also considerable variation in the choice of definition to disclose. The most common, base case definition (used in about a third of firm-year disclosures; Adame et al. 2019) is cash from operations minus capital expenditures. The remaining free cash flow disclosers choose to report a number with some additional adjustments. To the extent that disclosed free cash flow differs from the most common definition, the disclosed figure may reflect managers' private information about the value-relevance of the particular adjustments managers elect to make when calculating this

number. For these reasons, we expect that the market will react incrementally when disclosed free cash flow differs from the simple, base case definition.

To address this issue, we decompose *Disclosed FCF* into two components,

$$Disclosed\ FCF_i = Simple\ FCF_i + FCF\ Diff_i \quad (3)$$

Simple FCF is the simple definition of free cash flow as defined in equation (1) above. *FCF Diff* represents the incremental adjustments some firms make beyond the simple definition when disclosing free cash flow.¹⁰

Because we do not have quarterly disclosed free cash flows for most firms, we define the disclosed free cash flow surprise as

$$Disclosed\ FCF\ Surprise_i = Disclosed\ FCF_i - TTM\ Simple\ FCF_i \quad (4)$$

Since $Disclosed\ FCF_i = Simple\ FCF_i + FCF\ Diff_i$ (equation (3)), we may equivalently write the disclosed free cash flow surprise as

$$Disclosed\ FCF\ Surprise_i = Simple\ FCF\ Surprise_i + FCF\ Diff_i \quad (5)$$

In other words, assuming the market forms expectations based on the trailing twelve months' *Simple FCF*, the innovation in disclosed free cash flow includes changes in *Simple FCF* during the fourth quarter and any information contained in the adjustments managers choose to make beyond the simple definition (*FCF Diff*) for the full year. The resulting regression equation is

$$CAR_i = \gamma_0 + \gamma_1(Earnings\ Surprise_i) + \gamma_2(Simple\ FCF\ Surprise_i) + \gamma_3(FCF\ Diff_i) + \varepsilon_i \quad (6)$$

¹⁰ Differences between disclosed free cash flows and simple free cash flows could also reflect a different starting point (where *Simple FCF* begins with operating cash flows). We are interested in whether any modifications to simple free cash flow are informative, and thus include these observations in our main analyses, but results are not sensitive to excluding the 111 firm-year observations with a different starting point.

As before, if the market reacts incrementally to information contained in *Simple FCF Surprise*, the coefficient γ_2 will be positive. Any market reaction to the individual adjustments beyond the simple definition of free cash flow will be captured by γ_3 , the coefficient on *FCF Diff*.

We report results of this analysis in Table 5, Panel A, focusing only on the subset of firm-years in our sample in which a free cash flow number is disclosed. Results in columns 1 through 3 continue to show that within this subsample of 1,955 free cash flow disclosures, the market reaction to *Simple FCF Surprise* is significant and comparable in magnitude to the reaction to *Earnings Surprise*. These results are similar to results for full sample in Table 4.¹¹ Although the *FRC* is higher than the *ERC* (0.0036 versus 0.0027), the coefficients are not statistically different ($p = 0.3945$).

As discussed earlier, about one-third of our sample free cash flow disclosures contain a simple definition of free cash flows, and the remaining disclosures make some incremental adjustments. In column 4, we present only those 728 firm-years disclosing simple free cash flow. The coefficient on *Simple FCF Surprise* is 0.0055 which is notably higher than column 3 where all disclosers are pooled.

In column 5 of Table 5, we report results of tests of equation (6). The coefficients on both of the free cash flow measures, *Simple FCF Surprise* and *FCF Diff*, are significant. The market reacts to innovations in simple free cash flow and to the differential adjustments some firms make beyond the simple definition.

¹¹In Table 4, we exclude firm-years that disclose a free cash flow number that is different from *Simple FCF*. Results in Table 4, column 7 are therefore identical to results in column 4 of Table 5 for the simple disclosures.

Does the market react symmetrically to upward versus downward adjustments in disclosed free cash flow?¹² To address this question, we decompose *FCF Diff* into positive versus negative deviations from *Simple FCF*. We define *Positive FCF Diff* as equal to *FCF Diff* when it is positive and zero otherwise. *Negative FCF Diff* is defined analogously. Results are in columns (6) through (8) of Table 5. Interestingly, the coefficient on *Positive FCF Diff* is significant, but the coefficient on *Negative FCF Diff* is not, although the two coefficients are not statistically different according to an *F*-test.

In Panel B we partition the regression from equation (6) by cohort and intangible intensity. Turning first to cohorts, we see that the market response to earnings surprises is similar across cohorts; the *ERCs* are 0.0027 for both cohorts. However, the market reaction to free cash flow news (the *FRC*) for *Cohort 2* is more than double that for *Cohort 1* (0.0059 versus 0.0022). These values are statistically different with a p-value of 0.0132. From Table 4, the difference for the full sample was more muted (0.0024 for *Cohort 1* and 0.0034 for *Cohort 2*). Thus, our results suggest that free cash flow is even more informative within *Cohort 2* when free cash flows are disclosed in the earnings announcement. Moreover, adjustments to simple free cash flows (*FCF Diff*) appear to be priced more within *Cohort 2* (0.0026; p-value 0.0366) than within *Cohort 1* (0.0006; p-value 0.4688), although this difference is not statistically significant (p-value = 0.1553). Columns 3 and 4 partition free cash flow disclosers by intangible intensity. Conditional on free cash flow disclosure, differences between the *High* and *Low Intangible* groups are not statistically significant.

Overall, the market reacts significantly to information contained in free cash flow disclosure. This reaction is incremental and comparable in magnitude to the market reaction to

¹² In our sample, 37% of firms report a disclosed value of free cash flow that is greater than *Simple FCF*, and another 25% disclose a value that is smaller. The remaining firms disclose free cash flow equal to *Simple FCF*.

unexpected earnings. In answering the question of whether free cash flows have become more important for all firms over time, or whether there were more granular drivers, our results suggest evidence of both, although the impact of the changing firm composition is much greater than the overall trend in importance. The market reacts more strongly to information in *Simple FCF* when firms are younger, have more intangibles, and when free cash flows is disclosed in the earnings announcement, but increases on average for all firms, even when these firms with higher *FRCs* are excluded. The market also responds to deviations from the simple definition of free cash flow.

5.4 Long-Run Returns

To investigate whether the increase in response to free cash flows reflects investor learning, we examine longer-run abnormal returns over time. If free cash flow disclosure allows firms to communicate their status more effectively to investors, we expect to find a slow incorporation of free cash flow news as documented in Sloan (1996a) which is mitigated in recent years. We present the results in Table 6. In this analysis, we calculate four-factor abnormal returns over one-, three-, and 12-month periods for our full sample and for the subsamples of interest. In Table 6, Panel A, we consider the full time period. To test for changes over time in the market reaction, we also partition our full sample by subperiod. In Table 6, Panel B, we report results for 2009 and earlier, and in Panel C we report results for 2010 and later.

We find no reliable evidence of mispricing of the simple free cash flow surprise across any time period, suggesting that the market reaction to free cash flow news is generally efficient. Overall, our conclusion is that the time trend in *FRCs* does not reflect changes in the efficiency with which the market responds to free cash flow news.

5.5 Validation Test

So far, our results suggest that free cash flow has become more informative over time, especially for newer firms (*Cohort 2*), for firms with high intangible assets, and for free cash flow disclosers. As our final analysis, we examine instances when the news from earnings surprises and free cash flow surprises is inconsistent, for example when reported earnings exceed the earnings expectation, but reported free cash flows do not meet the free cash flow expectation.¹³ When the news signals are inconsistent, the market reaction will be consistent with either the earnings news or the free cash flow news; by construction, it cannot be consistent with both. If our interpretation of the market reaction to free cash flow news is correct, we expect that free cash flow is more likely to “win” this horse race with earnings when it is relatively more important. We therefore expect that the sign of the return is relatively more likely to be consistent with the sign of the free cash flow surprise when firms are newer (*Cohort 2*), when firms have more intangibles (*High Intangibles*) and when the firm discloses free cash flows in their earnings announcement (*Disclosers*).

To test these predictions, we construct a variable, *FRC Dominant*, which equals one when the earnings and free cash flow signals are inconsistent and the market response is in the direction of the free cash flow news; this variable equals zero if the market response is instead consistent with the earnings news. We estimate a logit regression with *FRC Dominant* as the dependent variable. Explanatory variables include indicators for the subsamples of interest.

Results are presented in Table 7. The evidence suggests that free cash flow surprises dominate in high intangible intensity firms. The coefficient on High Intangibles is significant in

¹³ As before, expectations are set as the trailing twelve months at the end of the prior quarter.

for the full sample, for disclosers, and in both cohorts. These results suggest that free cash flow news is particularly important for firms with high intangibles.

6. Conclusion

Investors have increasingly responded to free cash flow surprises over time. We provide evidence that the responsiveness, on average, is higher for newer firms, firms with more intangibles, and firms that explicitly disclose free cash flows in their earnings announcements. We find no evidence of mispricing of free cash flow surprises, suggesting that the increase in free cash flow responsiveness is due to changing economics rather than learning. Finally, when the earnings and free cash flows signals are inconsistent, investors price free cash flows more often in firms with high intangibles. Our results provide evidence of the importance of free cash flows, incremental to earnings.

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Appendix Variable Definitions

Variable	Description
<i>Accruals Surprise</i>	Current period accruals (Compustat NI minus OANCFY) less trailing twelve months' accruals (the sum of accruals for Q1, Q2, and Q3 of the current year and Q4 of the prior year); scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year
<i>Cohort</i>	Equals 1 for firms in "old" cohort and 2 for firms in "new" cohort. "Old" cohort defined as firms with available Compustat data prior to 1990. "New" cohort defined as firms with available Compustat data beginning in 1990 or later.
<i>Diff Indicator</i>	Indicator variable equal to one if disclosed value of FCF deviates from "simple" value (i.e., Compustat OANCF minus Compustat CAPX) and zero otherwise.
<i>Earnings Surprise</i>	Calculated as Compustat net income (NI) less trailing twelve months' net income (the sum of NIQ for Q1, Q2, and Q3 of the current year and Q4 of the prior year); scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year.
<i>FCF Disclosure</i>	Indicator variable equal to one if company discloses an annual "free cash flow" value in earnings announcement and zero otherwise.
<i>FRC (Naïve)</i>	Free cash flow "response coefficient" -- calculated as the coefficient from firm-specific rolling regressions of earnings announcement returns (<i>Three-day EA CAR</i>) on <i>Earnings Surprise</i> (winsorized but <i>not</i> decile-ranked) and <i>Simple FCF Surprise</i> (winsorized but <i>not</i> decile-ranked) over eight-quarter windows. Winsorized at the 1st and 99th percentiles by year.
<i>FRC Dominant</i>	Equals 1 (0) if sign of earnings surprise and free cash flow surprise differ and the sign of <i>Three-day EA CAR</i> corresponds with the sign of the free cash flow (earnings) surprise. Set to missing when earnings surprise and free cash flow surprise have the same sign.
<i>High Intangibles Indicator</i>	Indicator variable equal to one if firm is in top half of <i>Intangible Intensity</i> for the given year and zero otherwise.
<i>Intangible Intensity</i>	Intangible assets (Compustat INTAN) scaled by total assets (Compustat AT). Winsorized at the 1st and 99th percentiles by year.
<i>Ln(AF +1)</i>	Natural log of (analyst following plus one). Analyst following calculated as number of earnings estimates (NUMEST) for a given period from the I/B/E/S Summary Statistics dataset.
<i>Ln(Assets)</i>	Natural log of total assets (Compustat AT).
<i>Long-run CAR</i>	Cumulative abnormal returns for three, six, or 12 months following the earnings announcement window. Calculated using firm-level rolling regressions of returns (minus the risk-free rate) on the corresponding monthly Fama French four factors (Mkt. premium, SMB, HML, Momentum). Weighted by market value.
<i>Negative FCF Diff</i>	Equal to FCF Diff when FCF Diff is negative and zero otherwise; scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year (within <i>Diff Indicator =1</i> observations).
<i>OCF Surprise</i>	Current year operating cash flow (Compustat OANCFY) less trailing twelve months' operating cash flow (the sum of OANCFQ for Q1, Q2, and Q3 of the current year and Q4 of the prior year); scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year.
<i>Positive FCF Diff</i>	Equal to FCF Diff when FCF Diff is positive and zero otherwise; scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year (within <i>Diff Indicator =1</i> observations).
<i>Simple FCF surprise</i>	Current year Simple FCF less trailing twelve months' Simple FCF (the sum of Simple FCF for Q1, Q2, and Q3 of the current year and Q4 of the prior year); scaled by shares outstanding (Compustat CSHOQ) and price as of beginning of fiscal year (lagged PRCC_F) and decile ranked by year.
<i>Three-day EA CAR</i>	Cumulative abnormal returns over the t-1 to t+1 earnings announcement window (using CRSP RET and VWRETD).
<i>Time Trend</i>	Year of Compustat DATADATE minus 2004; e.g., equals 0 for observations with a fiscal year-end during 2004; equals 12 for observations with a fiscal year-end during 2016.

Figure 1

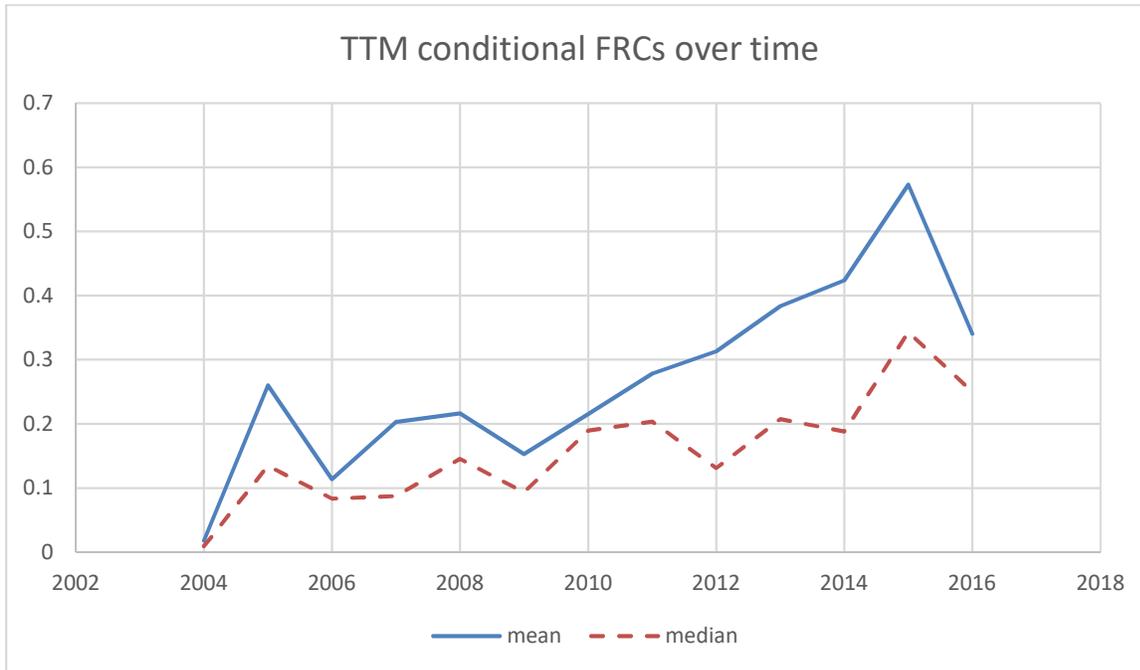


Figure 2, Panel A

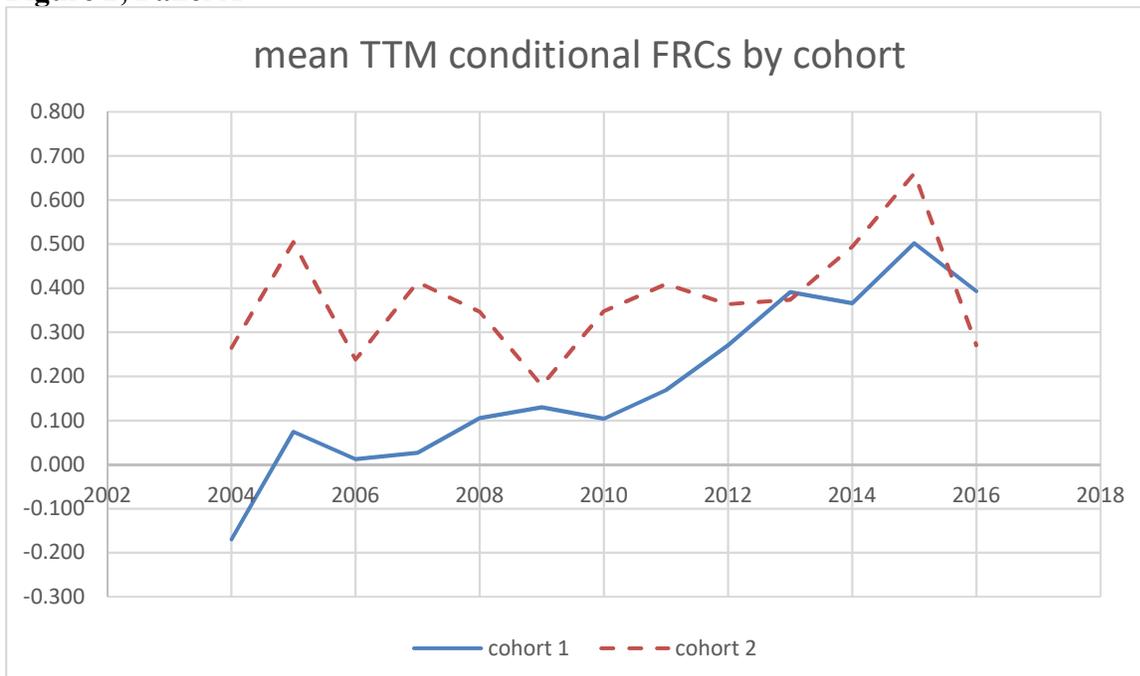


Figure 2, Panel B

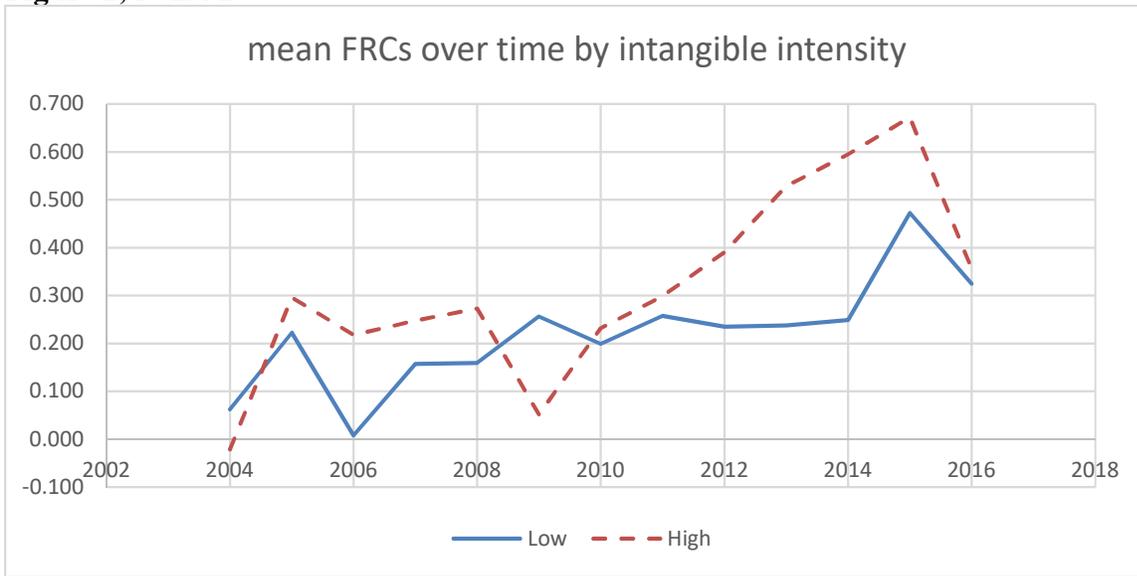


Figure 2, Panel C

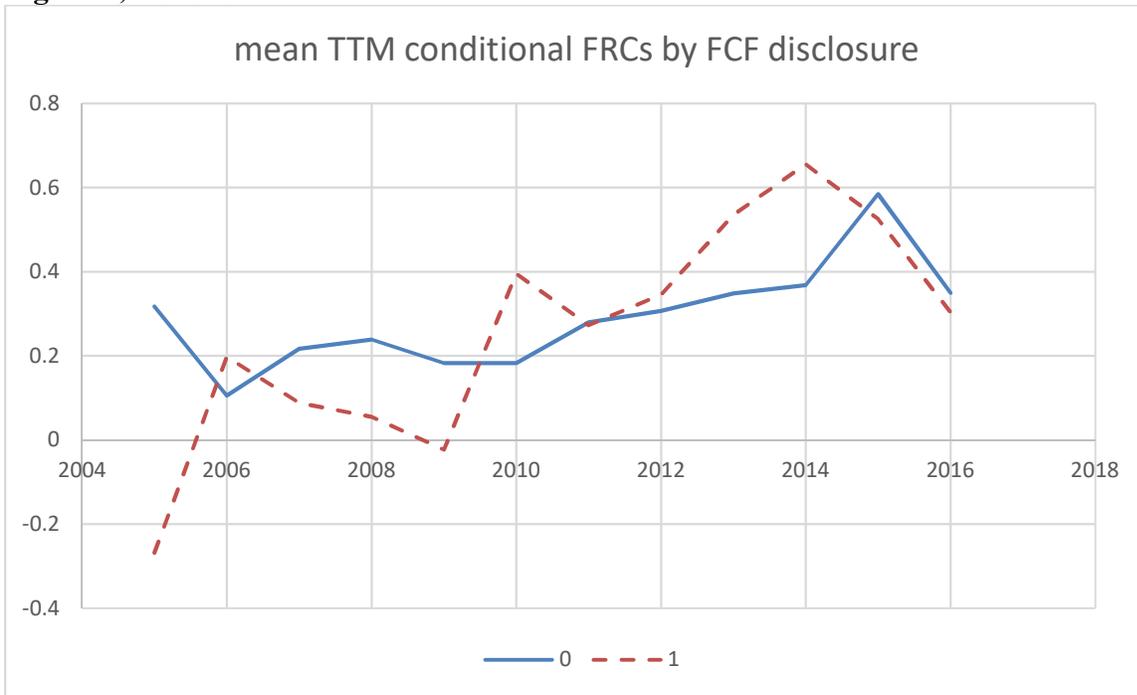


Table 1
Summary Statistics

Year	Total Firm-Years	Cohorts			Intangible Intensity		FCF Disclosure		
		Cohort 1	Cohort 2	% Cohort 1	Low	High	With FCF disclosure	Without FCF disclosure	% Disclosing
2004	999	516	483	51.7%	500	499	91	908	9.1%
2005	1,336	719	617	53.8%	668	668	121	1,215	9.1%
2006	1,269	687	582	54.1%	635	634	113	1,156	8.9%
2007	1,202	647	555	53.8%	601	601	122	1,080	10.1%
2008	1,161	623	538	53.7%	581	580	136	1,025	11.7%
2009	1,136	609	527	53.6%	568	568	164	972	14.4%
2010	1,091	590	501	54.1%	546	545	166	925	15.2%
2011	1,058	577	481	54.5%	529	529	167	891	15.8%
2012	1,021	558	463	54.7%	511	510	172	849	16.8%
2013	990	545	445	55.1%	495	495	187	803	18.9%
2014	955	526	429	55.1%	478	477	184	771	19.3%
2015	917	504	413	55.0%	459	458	178	739	19.4%
2016	857	485	372	56.6%	429	428	174	683	20.3%
Total	13,992	7,586	6,406	54.2%	7,000	6,992	1,975	12,017	14.1%

Table 2
Panel A. Descriptive Statistics

	Observations	Mean	StdDev	Min	p25	p50	p75	Max
<i>Earnings Surprise*</i>	13,874	0.011	0.146	-0.477	-0.005	0.001	0.007	3.189
<i>Simple FCF Surprise*</i>	13,748	0.002	0.053	-0.400	-0.010	0.001	0.013	0.486
<i>Three-day EA CAR</i>	13,357	0.005	0.085	-0.534	-0.033	0.003	0.042	2.711
<i>Cohort</i>	13,992	0.458	0.498	0.000	0.000	0.000	1.000	1.000
<i>Intangible Intensity</i>	13,992	0.187	0.198	0.000	0.017	0.118	0.308	0.796
<i>High Intangibles Indicator</i>	13,992	0.500	0.500	0.000	0.000	0.000	1.000	1.000
<i>Ln(AF + 1)</i>	13,992	1.899	1.019	0.000	1.386	2.079	2.708	4.025
<i>Ln(Assets)</i>	13,992	7.898	1.736	2.552	6.661	7.782	8.996	15.006
<i>Time Trend</i>	13,992	5.629	3.660	0.000	2.000	5.000	9.000	12.000
<i>FCF Disclosure</i>	13,992	0.141	0.348	0.000	0.000	0.000	0.000	1.000
<i>*Presented as continuous variable here, but scaled and decile ranked by year in analyses</i>								

Table 2
Panel B. Correlation Matrix

	<i>Earnings Surprise</i>	<i>Simple FCF Surprise</i>	<i>Three-day EA CAR</i>	<i>Cohort</i>	<i>Intangible Intensity</i>	<i>High Intangibles Indicator</i>	<i>Ln(AF + 1)</i>	<i>Ln(Assets)</i>	<i>Time Trend</i>
<i>Earnings Surprise</i>	1								
<i>Simple FCF Surprise</i>	0.1424 0.0000	1							
<i>Three-day EA CAR</i>	0.114 0.0000	0.1099 0.0000	1						
<i>Cohort</i>	0.0162 0.0562	0.0195 0.0226	0.0256 0.0031	1					
<i>Intangible Intensity</i>	-0.0053 0.5350	0.0124 0.1471	0.0147 0.0888	0.0527 0.0000	1				
<i>High Intangibles Indicator</i>	-0.0037 0.6596	0.0077 0.3694	0.0131 0.1291	0.0327 0.0001	0.7849 0.0000	1			
<i>Ln(AF + 1)</i>	-0.012 0.1589	0.0045 0.5979	0.0054 0.5347	-0.054 0.0000	0.0318 0.0002	0.0379 0.0000	1		
<i>Ln(Assets)</i>	-0.0246 0.0037	-0.0139 0.1023	-0.0368 0.0000	-0.269 0.0000	-0.0214 0.0113	-0.0823 0.0000	0.3232 0.0000	1	
<i>Time Trend</i>	-0.0002 0.9768	0.0001 0.9884	-0.0025 0.7748	-0.0174 0.0393	0.0749 0.0000	-0.0002 0.9853	-0.032 0.0002	0.1596 0.0000	1
<i>FCF Disclosure</i>	-0.0142 0.0949	0.0085 0.3195	0.0065 0.4537	-0.0236 0.0053	0.2513 0.0000	0.2123 0.0000	0.0271 0.0013	0.1015 0.0000	0.1161 0.0000

Table 3
Panel A. CAR Regressions

	(1)	(2)	(3)
<i>Earnings Surprise</i>	0.0034*** (0.0000)		0.0030*** (0.0000)
<i>Simple FCF Surprise</i>		0.0032*** (0.0000)	0.0028*** (0.0000)
Constant	-0.0145*** (0.0003)	-0.0121*** (0.0016)	-0.0286*** (0.0000)
Fixed effects	Year & Industry Year & Industry Year & Industry		
Observations	12,046	11,932	13,138
R-squared	0.0187	0.0173	0.0272
P-value for equality of coefficients on <i>Earnings Surprise</i> and <i>Simple FCF Surprise</i>	N/A	N/A	0.7731

Panel B. CAR Regressions with Decomposition of Earnings Surprise

	(1)	(2)
<i>Accruals Surprise</i>	0.0029*** (0.0000)	0.0031*** (0.0000)
<i>OCF Surprise</i>	0.0052*** (0.0000)	0.0032*** (0.0000)
<i>Simple FCF Surprise</i>		0.0022*** (0.0001)
Constant	-0.0392*** (0.0000)	-0.0409*** (0.0000)
Fixed Effects		
Observations	11,795	11,795
R-squared	0.0225	0.0235

Table 3, Continued
Panel C. CAR Regressions with Information Asymmetry Controls

	(1)	(2)	(3)
<i>Earnings Surprise</i>	0.0091*** (0.0000)		0.0075*** (0.0000)
<i>Earnings Surprise*Ln(Assets)</i>	-0.0005*** (0.0029)		-0.0004** (0.0270)
<i>Earnings Surprise*Ln(AF)</i>	-0.0008*** (0.0066)		-0.0008*** (0.0044)
<i>Simple FCF Surprise</i>		0.0078*** (0.0000)	0.0065*** (0.0000)
<i>Simple FCF Surprise*Ln(Assets)</i>		-0.0006*** (0.0016)	-0.0004** (0.0203)
<i>Simple FCF Surprise*Ln(AF)</i>		0.0001 (0.8605)	-0.0002 (0.6105)
<i>Ln(Assets)</i>	0.0014 (0.2331)	0.0017 (0.1760)	0.0031** (0.0318)
<i>Ln(AF)</i>	0.0057*** (0.0048)	0.0007 (0.7449)	0.0062** (0.0126)
Constant	-0.0361*** (0.0003)	-0.0265*** (0.0087)	-0.0643*** (0.0000)
Fixed effects	Year and Industry	Year and Industry	Year and Industry
Observations	12,046	11,932	13,138
R-squared	0.0217	0.0192	0.0307

Table 4
Panel A. Earnings and Free Cash Flow Surprises by Subgroups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample	Cohort 1	Cohort 2	Low Intangibles	High Intangibles	Non-Disclosers	FCF Disclosers
<i>Earnings Surprise</i>	0.0030*** (0.0000)	0.0029*** (0.0000)	0.0031*** (0.0000)	0.0029*** (0.0000)	0.0032*** (0.0000)	0.0030*** (0.0000)	0.0034*** (0.0027)
<i>Simple FCF Surprise</i>	0.0028*** (0.0000)	0.0024*** (0.0000)	0.0034*** (0.0000)	0.0022*** (0.0000)	0.0037*** (0.0000)	0.0027*** (0.0000)	0.0055*** (0.0000)
Constant	-0.0286*** (0.0000)	-0.0259*** (0.0000)	-0.0299*** (0.0000)	-0.0242*** (0.0000)	-0.0299*** (0.0000)	-0.0267*** (0.0000)	-0.0746*** (0.0000)
Fixed effects	Year & Industry	Year and Industry					
Observations	13,138	6,436	5,475	6,174	5,737	11,183	728
Observations with FCF disclosure	728	406	322	175	553	0	728
R-squared	0.0272	0.0333	0.0294	0.0243	0.0379	0.0270	0.0868
P-value for equality of coefficients on <i>Simple FCF Surprise</i> across groups	N/A	0.1014		0.0114		0.0236	

Table 4
Panel B. Earnings and Free Cash Flow Surprises by Subgroups interacted with Free Cash Flow Disclosure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample	Cohort 1	Cohort 2	Low Intangibles	High Intangibles	Cohort 1; Low Intangibles	Cohort 2; High Intangibles	Others
<i>Earnings Surprise</i>	0.0030*** (0.0000)	0.0029*** (0.0000)	0.0031*** (0.0000)	0.0029*** (0.0000)	0.0032*** (0.0000)	0.0026*** (0.0001)	0.0030*** (0.0000)	0.0033*** (0.0000)
<i>Simple FCF Surprise</i>	0.0027*** (0.0000)	0.0023*** (0.0000)	0.0031*** (0.0000)	0.0022*** (0.0000)	0.0035*** (0.0000)	0.0020*** (0.0011)	0.0040*** (0.0000)	0.0027*** (0.0000)
<i>FCF Discloser</i>	-0.0156** (0.0426)	-0.0028 (0.7052)	-0.0337** (0.0181)	-0.0067 (0.6297)	-0.0167* (0.0908)	-0.0029 (0.8492)	-0.0410** (0.0249)	-0.0059 (0.5074)
<i>Simple FCF Surprise*FCF Discloser</i>	0.0026** (0.0274)	0.0006 (0.5948)	0.0056*** (0.0099)	0.0004 (0.8328)	0.0031* (0.0537)	0.0005 (0.8303)	0.0080*** (0.0075)	0.0004 (0.7803)
Constant	-0.0270*** (0.0000)	-0.0257*** (0.0000)	-0.0285*** (0.0001)	-0.0242*** (0.0000)	-0.0283*** (0.0000)	-0.0255*** (0.0001)	-0.0322*** (0.0003)	-0.0241*** (0.0003)
Fixed Effects	Year & Industry	Year and Industry	Year and Industry	Year and Industry	Year & Industry	Year and Industry	Year and Industry	Year and Industry
Observations	11,911	6,436	5,475	6,174	5,737	3,426	2,727	5,758
Free Cash Flow Disclosure Observations	728	406	322	175	553	69	216	443
Percent Free Cash Flow Disclosure	6.1%	6.3%	5.9%	2.8%	9.6%	2.0%	7.9%	7.7%
R-squared	0.0280	0.0334	0.0309	0.0244	0.0388	0.0307	0.0446	0.0317
P-value for equality of coefficients on <i>Simple FCF Surprise</i> across groups	N/A	0.2281		0.0417		0.0245		N/A

Table 5
Panel A. Free Cash Flow Surprises for Free Cash Flow Disclosers

	(1) All Disclosers	(2) All Disclosers	(3) All Disclosers	(4) Simple obs.	(5) Diff obs.	(6) Diff obs.	(7) Diff obs.	(8) Diff obs.
<i>Earnings Surprise</i>	0.0033*** (0.0000)		0.0027*** (0.0000)	0.0034*** (0.0027)	0.0023*** (0.0016)	0.0023*** (0.0018)	0.0024*** (0.0013)	0.0023*** (0.0026)
<i>Simple FCF Surprise</i>		0.0041*** (0.0000)	0.0036*** (0.0000)	0.0055*** (0.0000)	0.0028*** (0.0016)	0.0029*** (0.0014)	0.0027*** (0.0023)	0.0029*** (0.0013)
<i>FCF Diff</i>					0.0020** (0.0119)			
<i>Positive Diff</i>						0.0018*** (0.0060)		0.0027** (0.0155)
<i>Negative Diff</i>							0.0022 (0.2677)	-0.0031 (0.3236)
Constant	-0.0228** (0.0488)	-0.0266** (0.0184)	-0.0381*** (0.0012)	-0.0746*** (0.0000)	-0.0439*** (0.0015)	-0.0409*** (0.0021)	-0.0410*** (0.0057)	-0.0318** (0.0389)
Observations	1,955	1,955	1,955	728	1,227	1,227	1,227	1,227
R-squared	0.0255	0.0318	0.0416	0.0868	0.0494	0.0503	0.0451	0.0515
P-value for equality of coefficients on Earnings Surprise and Simple FCF Surprise	N/A	N/A	0.3945	0.2524	0.7030	0.6825	0.8078	0.6405
P-value for equality of coefficients on <i>Positive Diff</i> and <i>Negative Diff</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1576

Table 5
Panel B. Free Cash Flow Surprises for Free Cash Flow Disclosers by Subgroups

	(1) Cohort 1	(2) Cohort 2	(3) Low Intangibles	(4) High Intangibles
<i>Earnings Surprise</i>	0.0027*** (0.0005)	0.0027** (0.0115)	0.0050*** (0.0010)	0.0020*** (0.0047)
<i>Simple FCF Surprise</i>	0.0022*** (0.0066)	0.0059*** (0.0000)	0.0034** (0.0406)	0.0037*** (0.0000)
<i>FCF Diff</i>	0.0006 (0.4688)	0.0026** (0.0366)	0.0017 (0.3230)	0.0014* (0.0594)
Constant	-0.0294** (0.0306)	-0.1392*** (0.0000)	-0.0518* (0.0952)	-0.0453*** (0.0013)
Fixed effects	Year and Industry	Year and Industry	Year and Industry	Year and Industry
Observations	1,119	836	463	1,492
R-squared	0.0473	0.0707	0.0898	0.0404
P-value for equality of coefficients on <i>Simple FCF Surprise</i> across		0.0132		0.8938
P-value for equality of coefficients on <i>Diff</i> across groups		0.1553		0.8433

Panel C. Free Cash Flow Surprises for Free Cash Flow Disclosers by Subgroups and Direction of Difference from Simple Free Cash Flow

	(1) Cohort 1	(2) Cohort 2	(3) Low Intangibles	(4) High Intangibles
<i>Earnings Surprise</i>	0.0027*** (0.0005)	0.0029*** (0.0077)	0.0049*** (0.0015)	0.0020*** (0.0047)
<i>Simple FCF Surprise</i>	0.0022*** (0.0064)	0.0059*** (0.0000)	0.0036** (0.0310)	0.0037*** (0.0000)
<i>Positive Diff</i>	0.0005 (0.4360)	0.0025** (0.0267)	0.0030 (0.1465)	0.0009 (0.1100)
<i>Negative Diff</i>	-0.0001 (0.9757)	-0.0061 (0.3275)	-0.0113* (0.0811)	0.0021 (0.4776)
Constant	-0.0284* (0.0543)	-0.1023*** (0.0015)	-0.0252 (0.4288)	-0.0485*** (0.0021)
Fixed effects	Year and Industry	Year and Industry	Year and Industry	Year and Industry
Observations	1,119	836	463	1,492
R-squared	0.0474	0.0742	0.0997	0.0408

Table 6
Panel A. Future Returns for the Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
DV: long-run CARs	1-month; Group 1	3-month; Group 1	12-month; Group 1	1-month; Group 2	3-month; Group 2	12-month; Group 2
<i>Earnings Surprise</i>	0.0000 (0.2245)	-0.0000 (0.7733)	-0.0000 (0.9897)	0.0000 (0.9220)	0.0000 (0.7859)	0.0000 (0.7119)
<i>Simple FCF Surprise</i>	0.0000 (0.8619)	-0.0000 (0.7446)	-0.0000 (0.3022)	-0.0000 (0.7728)	-0.0000 (0.3624)	-0.0000 (0.1438)
Constant	-0.0000 (0.4443)	0.0000 (0.2766)	-0.0000 (0.2582)	-0.0000 (0.6403)	-0.0000 (0.7416)	-0.0001** (0.0223)
Observations	3,355	3,355	3,355	586	586	586
R-squared	0.0064	0.0133	0.0077	0.0470	0.0432	0.0468

Panel B. Future Returns for 2009 and Earlier

	(1)	(2)	(3)	(4)	(5)	(6)
DV: long-run CARs	1-month; Group 1	3-month; Group 1	12-month; Group 1	1-month; Group 2	3-month; Group 2	12-month; Group 2
<i>Earnings Surprise</i>	0.0000 (0.4530)	0.0000 (0.7114)	0.0000 (0.7581)	0.0000 (0.5021)	0.0000 (0.3543)	0.0000 (0.4400)
<i>Simple FCF Surprise</i>	0.0000 (0.4033)	-0.0000 (0.2305)	-0.0000 (0.1541)	-0.0000 (0.2480)	-0.0000 (0.2589)	-0.0000 (0.1434)
Constant	-0.0000 (0.1839)	0.0001 (0.2177)	0.0001 (0.1630)	-0.0000 (0.6647)	-0.0000 (0.6102)	-0.0002* (0.0604)
Observations	1,642	1,642	1,642	215	215	215
R-squared	0.0074	0.0250	0.0112	0.0805	0.0369	0.0450

Panel C. Future Returns for 2010 and Later

	(1)	(2)	(3)	(4)	(5)	(6)
DV: long-run CARs	1-month; Group 1	3-month; Group 1	12-month; Group 1	1-month; Group 2	3-month; Group 2	12-month; Group 2
<i>Earnings Surprise</i>	0.0000 (0.2318)	-0.0000 (0.2897)	-0.0000 (0.4020)	-0.0000 (0.5326)	-0.0000 (0.6952)	0.0000 (0.8855)
<i>Simple FCF Surprise</i>	-0.0000 (0.3999)	0.0000 (0.5987)	0.0000 (0.6108)	0.0000 (0.6359)	-0.0000 (0.6867)	-0.0000 (0.4376)
Constant	0.0000 (0.6395)	0.0000 (0.1256)	-0.0002** (0.0408)	0.0000 (0.6883)	0.0001 (0.1706)	0.0001 (0.2314)
Observations	1,713	1,713	1,713	371	371	371
R-squared	0.0145	0.0102	0.0129	0.0473	0.0621	0.0560

Table 7
Determinants of Market Reaction to Inconsistent Signals

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DV: FRC Dominant (Naïve)	Full Sample	Non-Disclosers	Disclosers	Cohort 1	Cohort 2	Low Intangibles	High Intangibles
<i>Cohort</i>	-0.0137 (0.6068)	-0.0157 (0.5847)	0.0126 (0.8599)			-0.0136 (0.7192)	-0.0092 (0.8066)
<i>High Intangibles</i>	0.0658** (0.0154)	0.0436 (0.1292)	0.2580*** (0.0020)	0.0655* (0.0744)	0.0669* (0.0983)		
<i>FCF Discloser</i>	0.0118 (0.7631)			0.0022 (0.9658)	0.0242 (0.6814)	-0.1427* (0.0587)	0.0686 (0.1335)
<i>Diff Indicator</i>			-0.0703 (0.3426)				
Constant	-0.0174 (0.6831)	-0.0043 (0.9239)	-0.1444 (0.2964)	-0.0296 (0.2361)	-0.0471 (0.1049)	-0.0073 (0.8982)	0.0297 (0.6172)
Fixed Effects	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry
Observations	5,693	4,895	798	3,168	2,525	2,845	2,848
R-squared	0.0012	0.0005	0.0129	0.0011	0.0013	0.0013	0.0008

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1