VALUE RELEVANCE OF EARNINGS AND CASH FLOWS-A REVISIT

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Value Relevance of Earnings and Cash Flow- A revisit

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CERTIFICATE OF ORIGINALITY

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Value Relevance of Earnings and Cash Flow- A revisit

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Abstract

This study examines the value relevance of earnings and operating cash flow (OCF) using a U.S. sample from 1989 to 2019. First, I continue to find significant value relevance of earnings and OCF for this long sample period till recent. Second, I document the trend of the value relevance of the two accounting numbers over the past three decades and find that the value relevance of earnings is decreasing over the sample period, while the additional value relevance of OCF does not have a significant change, implying that other information than OCF are providing supplementary information to compensate the decreasing information content in earnings. Third, I find the value relevance of earnings and OCF are affected by information environment. I proxy information environment by firm size, media coverage and analyst following. Consistent with the hypothesis that the response coefficients of the accounting numbers can be higher when the information environment improves the quality of the numbers, my results indicate that the value relevance of earning and OCF is higher for firms with better information environment. We also find that the supplementary role of OCF for earnings reduced when size and number of analysts following are larger.

Keywords: Value Relevance, Earnings, Operating Cash Flow (OCF), Information Environment.

1. Introduction

In my study, I use US stock market to examine the earnings-return and operating cash flow (OCF)-return relation from the period 1989 to 2019. I also examine how does information environment affect the relations. Since Ball and Brown (1968), academics have continually investigated the value relevance of financial information – the statistical relations between stock market values or returns and financial statement information. However, the term value relevance was not came up with until Amir, Harris, and Venuti (1993). After that, the formal definition and measure of value relevance has been provided in Beaver (1998), Ohlson (1999), and Barth (2000). That is, if accounting numbers have statistically significant association with security market value, then we think the accounting number is value relevant. A large number of constituencies have interest in research of value relevance, such as firm managers, standard setters (IASC and FASB), information intermediaries, regulators, policy makers and financial statement users etc. As academic researchers, we are often interested in how capital allocation and formation is affected by the accounting information as well.

A healthy economy and well functioned capital market demand high quality accounting information, and value relevance is one of the basic attributes of accounting quality (Francis et al. 2004). For investors, they could benefit from using relevant information to make equity investment decisions. Francis and Schipper (1999) noted that accounting information has characteristics of both value relevance and quality, which are different issues. For example, Francis et al. (2004) specified seven different accounting quality attributes, either market-based or accounting-based. They find that value relevance is one, if not the only one of the most important attributes of accounting quality. If a company could provide good quality information, then investors could rely on that good quality information to better price the stocks, therefore the stock returns should be more responsive to the accounting numbers that the company provided.

In this study, I examine the value relevance of earnings and operating cash flow (OCF) together. Prior studies find OCF has additional value relevance beyond earnings and the additional value relevance of OCF depends on the property of earnings. Fingers (1994) show that earnings could help predict earnings and OCF but does not support that earning could better predict OCF than OCF itself, suggesting that OCF provides valuable information to the market. Cheng, Liu and Shaefer (1996) document that OCF does provide incremental information content value, and they also suggest and find that the incremental information content of OCF increases with a decrease in the permanence of earning.[1] These studies show that OCF should be value-relevant and provides a supplementary role for earnings when earnings are of lower quality and contain less information content. Therefore, in this study, I do investigation on the value relevance of OCF and earnings together to provide evidence on whether OCF is playing a supplementary role for earnings over the long sample period as earnings' information content decreases.

Firstly, regarding the overall value relevance of earnings and OCF over the long sample period, my results are generally consistent with the previous literature, showing that both of the accounting numbers are associated with market reactions providing useful information content to the investors. The presence of the value relevance of earnings and OCF are robust through using different regression models, including Fama-Macbeth method and pooled regression with or without different kinds of fixed effects. However, in terms of the magnitude, our results show that the value relevance of earnings is lower than what has been documented before the 21st century. For example, the coefficient of ΔE_{jt} is 0.642 for pooled regression and 0.668 for Fama-Macbeth method, which is slightly lower than the 0.74 reported in Easton and Harris (1991). The relation between E_{jt} and returns levels is 0.141, which is significantly lower than the 1.02 reported in Easton and Harris (1991). The reduced earnings' information content

[1] In this paper, I use information content and value relevance interchangeably.

is also reflected by a lower *ERC* ($\sum(\Delta E_{jt}, E_{jt})$) comparing to the previous literature. My results indicate a decreased association between earnings levels and stock returns over recent decades.

In my second set of analyses, I study the trend of the value relevance of earnings and OCF for the past three decades. Many studies have already documented a decreasing trend in the value relevance of earnings. The decreasing trend in value relevance of earnings may suggest that the additional value-relevance of OCF should increase since investors may rely more on cash flow numbers when earnings is of low quality. However, the reason for the decreasing trend may also decrease the information role of OCF, causing the value-relevance of OCF decreasing as well. For example, there might be other information sources that are valued by the investors. Collins, Maydew and Weiss (1997) show that incremental value relevance of earnings has declined while value-relevance of book values has increased due to intangible items. Francis and Schipper (1999) indicates that financial accounting information has become less value relevant over time and the explanatory power of both earnings levels and changes significantly decreased over time majorly due to high-tech industry. Of course, the trend also depends on if the market is fixated on earnings, that is if its attention to OCF increases. Wilson (1987) finds evidence that for a given amount of earnings, the stock market reacts much favorably larger to its cash flow component. Lipe (1990) suggested that returns-earnings relation depends on the relative ability of earnings versus alternative information to predict future earnings as well as persistence of earning, showing that the market pays attention to information beyond bottom line earnings. Therefore, I investigate the trend of value relevance of both earning and OCF at the same time. If the value relevance of OCF is increasing as the value relevance of earnings decreases, the result is consistent with OCF is playing a supplementary role for earnings. In contrast, an insignificant trend of value relevance of OCF would suggest there are other information sources providing more additional information than OCF does.

I run regressions for 31 years including both levels of and changes in earnings and OCF. To measure the value relevance, I use earnings response coefficient (*ERC*) or OCF response coefficients (*CRC*) as the dependent variable. Specifically, I run the regression of abnormal returns on levels of and changes in earnings and OCF (Cheng et al. 1996). Then I calculate the earnings response coefficient (*ERC*) as the sum of coefficients of earnings (E_{jt}) and changes in earnings (ΔE_{jt}), and the cash flow response coefficient (*CRC*) as the sum of coefficients of OCF (CF_{jt}) and changes in OCF (ΔCF_{jt}). The summation of *ERC* and *CRC* (labeled as total response coefficient, or *TRC*) captures the value relevance of the two accounting variables combined.

I then provide the trend analysis results. Consistent with previous research, we find that value relevance of earnings indeed decreases over time. For OCF, I find that the OCF response coefficient does not appear to have an obvious time trend. Our results suggest that the reasons for the decline in the information content of earnings do not affect time-series variation in the information content of the OCF. And more importantly, the decreased information content of earnings is compensated by other information sources than OCF.

In my third set of analyses, I examine the effect of information environment on the value relevance of earnings and OCF. Prior literature suggest that information environment is a determining factor of value relevance of earnings and OCF. For example, Cheng, Chu and Ohlson (2020) find that financial analysts' forecast performance increases with size; similarly, the value relevance of earnings should increase in size. Studies also suggest that information environment could be improved by getting available other information. For example, Bryan and Tiras (2007) suggest that analysts would rather rely more on other non-accounting information than accounting fundamentals when facing highly asymmetry information environment. Moreover, when businesses become more complex, other information may be especially needed and OCF may not fulfill its supplementary role. According to the definition

of information environment: "the aggregate of individuals, organizations, or systems that collect, process, or disseminate information; also included is the information itself"[2], firm size can improve the information environment since large firms have better ability in collecting, process, and disseminate information. Therefore, I follow Cheng, Chu and Ohlson (2020) and use size as a main surrogate for measuring the information environment.

Besides firm size, previous literature also indicates that analyst following (Brown, Richardson and Schwager (1987) Fan, So and Yeh (2006)) and media coverage (Weng 2018) can have huge impact on information environment. A variety of information intermediaries exists in capital market and securities analysts are majorly one of them. They play important roles to digest, utilize and interpret firms' accounting information (Trueman 1994). Generally speaking, if firms are followed by more financial analysts, their financial statements usually have high quality. External professional analysts could continuously monitor the market and limit speculative behaviors by making precise financial information and less noise (Barth and Hutton 2004; Bae, Tan and Welker 2008). In addition, social media, such as newspapers, also play an important role in disseminating information to a broad audience, especially to individual investors. Merton (1987) postulates that when market information is incomplete, investors are not aware of all the securities. Therefore, firms need to provide a high return to compensate the shareholders if they are diversified imperfectly and have low recognition. Media coverage could broaden investor recognition by disseminating information to a wide audience. Thus, firms with intensive media coverage could have a lower return than firms neglected (Fang and Peress 2009). In my paper, I find that the values of size, financial analyst following, and media coverage are highly but not perfectly correlated with a 0.358 correlation between size and media coverage, a 0.964 correlation between size and analyst following, and a 0.324 correlation between media coverage and analyst following (all significant at the 0.01

[2] https://www.thefreedictionary.com/information+environment

level), indicating these measures can work as proxies for one construct, information environment, but from different perspectives.

To examine the information environment's effect on earnings relevance, I partition the sample based on the median of the firm size, number of financial analysts and the media coverage into two subsamples: below median and above median. The empirical results generally show that the value relevance of the two accounting numbers or combined are higher when firms are larger, have more analyst following, and have more media coverage. The results are consistent with that information environment improves the information content of accounting numbers. In addition, I also find although the value relevance of both accounting numbers is generally lower for small firms and firms with lower number of analysts following, the degree of the decline is different for earnings and OCF. The value relevance of OCF is even higher than the value relevance of earnings for firms with below-median firm size. The evidence is consistent with the notion that the OCF is providing some supplementary information when the firms are relatively small and has low number of analysts following. However, this result does not hold when using media coverage as the proxy for information environment.

This study contributes to the value relevance literature in a couple of ways. First, as both earnings and OCF are considered the most important profitability indicators in financial statements when evaluating a company, it is important to understand the relative weighting of value relevance of earnings and OCF. Cheng, Chu and Ohlson (2019) find that when firms are small, financial analysts forecasts perform worse than forecasts from naïve models, suggesting that the market may not pay attention to supplementary information. That is, the market may be fixated on earnings. In this case, even if value relevance of earnings can be low when the information environment is poor, the OCF may not have any supplementary role due to the lack of attention from the market. When the information environment improves and investors

start to look at OCF information, additional value relevance of OCF may then be higher. By examining the information content of earnings and OCF at the same time, we can evaluate the relative usefulness of the two accounting numbers. Second, the US capital market changes over the past few decades, and it is also important to study the overall trend of the value relevance of financial information. The decreasing trend in value relevance of earnings may suggest that the additional value-relevance of OCF should increase. However, the reason for the decreasing trend may also decrease the information role of OCF (Collins, Maydew and Weiss (1997), Francis and Schipper (1999)). Therefore, it is worth to look at the trend of the value relevance for earnings and OCF at the same time over a longer period. By showing a different time trend of information content of earnings and OCF, my study suggests that the reasons to explain the time-series variation of value relevance of earnings and OCF can be different. Third, this study also provide evidence that information environment is a factor in determining value relevance and better information environment is associated with higher value relevance of accounting numbers.

The remaining of the paper is organized as follows: Section II review the related literature; section III describes data and sample; Section IV describes my research design and methodology; Section V reports my empirical results and Section VI concludes.

2. Literature Review

2.1 Value Relevance of Earnings

In the wake of Ball and Brown (1968), researchers have been investigating the association between unexpected earnings and abnormal return to identify the value-relevance of earnings (e.g., Beaver, Clarke and Wright 1979; Beaver, Lambert and Morse 1980; Collins and Kothari 1989). By documenting a positive relation between the unexpected income change and the stock price adjustment, Ball and Brown (1968) provides evidence of the usefulness of existing accounting income numbers. Later, Ohlson (1989) proposes a model that predicts that both

earnings levels and changes are associated with return. Easton and Harris (1991) show that both earnings levels and changes have explanatory power when they are included in a simultaneously regression of annual returns on earnings. The logic behind this study is that market value and book value are both "stock" variables that indicate the firm's equity holders' wealth. The related "flow" variables are, respectively, earnings divided by market returns and beginning price. Consequently, earnings divided by the beginning price should be associated with the stock returns. Ohlson and Shroff (1992) considers theoretical aspects of the specification of an earnings variable to explain contemporaneous returns. Ali and Zarowin (1992) find that earnings level variable as a regressor materially increases both the explanatory power and the ERC. Other studies such as Beaver (1968), Beaver, Clarke and Wright (1979), Easton, Harris and Ohlson (1992) all indicate that (changes in) accounting earnings numbers are reflected in the stock returns, and therefore, the accounting numbers are meaningful to the capital market, which means they are value relevant. However, the usefulness of accounting numbers depends on certain characteristics of the earnings. Freeman and Tse (1992a) presents evidence that an increase of absolute value of unexpected earnings leads to a decline of marginal response of stock price to unexpected earnings. They argue that as the absolute magnitude of unexpected earnings increases, the "persistence" of earnings decreases. Besides that, earnings may contain transitory items whose valuation implications are limited. Since debt covenants and compensation contracts are often based on reported accounting income, managers usually have inventive to introduce transitory elements in earnings (Cheng, Liu and Schaefer 1996).

2.2 Value Relevance of Operating Cash Flow (OCF)

Though the informativeness of earnings holds preeminent status as a primary indicator for valuation, the components of income are the subject of controversy. As a result, numerous

researchers, practitioners, and regulatory bodies start to examine to what extent that earnings components could contribute to earnings' value relevance. It becomes intuitive for researchers to contrast the effect of the cash flow component with the accrual component of earnings under the context of earnings' "information content" (Dechow 1994; Sloan 1996; Cheng, Liu and Schaefer 1996; Xie 2001; Cheng and Yang 2003; Cheng and Thomas 2006).

The association of accruals and OCF with security returns is addressed in Rayburn (1986). If any information regarded as a function of accrual adjustment process that could transform cash flow into earnings, then that information must be incremental to which earnings could provide besides cash flow about operating activities. Livnat and Zarowin (1990) investigates whether the disaggregation of total cash flows into their components yields greater associations with annual security returns than accruals or aggregate cash flow. When earnings' valuation implications are limited by transitory items, OCF disclosures may play a larger role as an additional value signal. However, if the less relevance is due to increasing earnings management, then the incremental information content of OCF may increase. Dechow (1994) finds that earnings are more strongly associated with stock returns than are realized cash flows over short measurement intervals**.** Ali (1994) shows that the persistence of both working capital from OCF declines as the absolute value of changes in these numbers increase. Dechow, Kothari and Watts (1998) reveal the relation between earnings and cash flows and implies earnings could better predict future OCF than current OCF**.** Kumar and Krishnan (2008) examine how value relevance of accruals and OCF varies with investment opportunities. Givoly, Hayn and Lehavy (2009) indicates that analysts' forecasts of cash flows have limited information and are only weakly associated with returns. One of the major reasons can be the increasing availability of other information through time, especially in recent years (e.g., due to big data). Lee (2012) report that, firms usually have particularly high incentives to upward manage reported OCF, even after controlling for earnings' level. Cheng, Li and Zhang (2020)

finds that OCF opacity is positively associated with future stock price crash risk. Cheng, Liu and Schaefer (1996) assess the incremental power of OCF and earnings in explaining stock returns conditional on the degree of permanence of earnings. Results show that transitory earnings are shown to have a smaller marginal impact on security return.

2.3 Trend of Value Relevance of Earnings and OCF over The Last Three Decades

The value relevance of earnings and its components is not constant over time. There appears to be a widespread impression that historical cost financial statements have lost their value-relevance because of wholesale changes in the economy (Dontoh, Radhakrishnan, and Ronen 2004). Since earnings are highly managed which decreases earnings quality, investors may have to seek other information. Brown, Lo and Lys (1999) show that scale effects present in levels regressions increase R^2, and this effect increases in the scale factor's coefficient of variation. Previous research has suggested that earnings quality or characteristics have changes over time, leading to the decreasing trend in value relevance of earnings. Givoly and Hayn (2000) suggest that relation between the economic performance of firms and accounting earnings is not stable over time, and the time trend is consistent with an increase of conservatism. Dontoh, Radhakrishnan and Ronen (2004) finds that the decline in value relevance of price and accounting information measured by R^2 is mainly due to the noninformation based trading. Srivastava (2014) shows that new listed firms exhibit lower earnings quality than its predecessors mainly because of higher intangible intensity.

If stock price is the present value of future cash flows, the deterioration in the association between stock prices and accounting earnings implies a growing inability of accounting numbers to forecast future cash flows. Kim and Kross (2005) finds that the relationship between current earnings and future OCF has increased over time. Dichev and Tang (2008) indicates that accounting matching has become worse over time and this trend has a pronounced

effect on the properties of the resulting earnings. Previous research has suggested that earnings quality or characteristics have changes over time, leading to the decreasing trend in value relevance of earnings. Beaver, McNichols and Wang (2020) find that guidance, disaggregated line items and analyst forecasts are bundled with earnings announcements more frequently, and each of these concurrent disclosures are associated with the increase in earnings announcements information content over time.

2.4 Information Environment and Value Relevance

2.4.1 Effect of Information Environment on Value relevance of Earnings

Studies have shown that a better information environment leads to better earnings quality and less information transparency. Surowiecki (2004) use a collaborative manner through "wisdom of crowds" to organize information in social media, and relies heavily on the participation of individual contributors. Cheng, Chu and Ohlson (2020) find that a better information environment improves sales forecasts more than profit margin forecasts if information environment is surrogated by firm size. They also suggest that when firms are small, the market may not pay attention to supplementary information and be fixated on earnings. Fan, So and Yeh (2006) investigates the accuracy of the earnings forecasts of financial analysts and indicate that analyst forecasts outperform random walk time-series forecasts. Brown, Richardson and Schwager (1987) conclude that an information interpretation underlies the association between financial analyst forecast superiority and predictor variables. Wiedman (1996) extend their work and find that financial analyst forecast errors have a higher association with excess returns than random walk forecast errors. Fang and Peress (2009) find that stocks with no media coverage earn higher returns than stocks with high media coverage even after controlling for well-known risk factors. Balachandran and Mohanram (2011) find no evidence that firms with increasing conservatism have greater decline in value relevance

over time. Kormendi and Lipe (1987) uncover a new dimension to the earnings information content and find little evidence that the reactions of stock returns to unexpected earnings are excessively volatile. Collins and Kothari (1989) use a simple discounted dividends valuation model to show that earnings response coefficient varies negatively with systematic risk and risk-free rate, and positively with earnings persistence and growth prospects.

2.4.2 Effect of Information Environment on Additional Value relevance of OCF

Researchers also explore the relation between earnings and earnings components and try to evaluate the value relevance of OCF conditioning on earnings. Using both analytical models and empirical tests, Dechow, Kothari and Watts (1998) characterize the movement of earnings, accruals and cash flows under the assumption of a random walk sales process. The operating cash cycle plays a very important role in how important the earnings is in predicting future OCF. Their finding suggests that sales shocks increase revenue accruals and result in a negative correlation between accrual and cash flow components of earnings. Nevertheless, even the accrual component could mitigate the matching and timing issues of cash transactions, OCF still holds a central position when evaluating a firm's riskiness. No firm can operate or survive without generating cash inflows. Therefore, the OCF could be informative under certain circumstances.

Cheng, Liu and Schaefer (1996) explore value relevance of OCF when the accrual component of earnings (e.g., transitory, non-cash revenues or expenses or unrealized gains or losses), and therefore the reported earnings, are transitory. By analyzing the changes model and model with both changes and levels of OCF and earnings, Cheng, Liu and Schaefer (1996) find that when the accrual component of reported earnings, and therefore the reported earnings themselves, are transitory, the disclosure of OCF plays a larger role as an additional value signal. Specifically, when earnings permanence decreases, the incremental information content of the OCF will increase, and the incremental information content of reported earnings will

decrease. These findings also suggest that rational investors seek out other information sources when they doubt one accounting variable and that they are willing to utilize all available, relevant information to improve their assessment of the firm's future prospect.

Prior studies indicate that multiple accounting signals make for a better tool than any single accounting variable alone when evaluating the firm's performance. For example, some studies find that capital markets place less weight on extreme, relative to moderate, earnings. Cheng and Yang (2003) further enhance our understanding of the debate on the role of earnings components as multiple signals about earnings' value relevance. They find that in firm valuation, only moderate OCF provides incremental value relevance to earnings. Similarly, only moderate earnings supplement the OCF in firm valuation. And when earnings are extreme, but OCF is moderate, cash flow replaces earnings to become the primary indicator of the firm's performance. Collectively, these studies confirm the information content of earnings components and reveal information content's intricate relation with both earnings and OCF. The insight in these works highlights that the value relevance of earnings depends on the properties of the earnings components, especially the informativeness of an individual component as a performance measure.

3. Data and Sample Selection

I obtained security returns from the Center for Research in Security Price (CRSP). I obtained accounting earnings, OCF, and price data from the Compustat. I defined earnings as income before extraordinary items. The sample period starts from 1989 and extends to 2019. The sample is not restricted to any industry or fiscal year-end; however, it is restricted to firms with no changes in fiscal year-end during 1989 to 2019. Abnormal annual security returns are defined as the differences between actual returns and expected returns based on parameters

from individual firm time-series market models. I estimate the market models over the 60-month period preceding the cumulating period for the abnormal returns of each firm. Abnormal returns are cumulated over the 12 months extending from 9 months prior to through 3 months after each firm's respective fiscal year- end. Our final sample includes 3,558 unique firms and 47,560 firm-year observations.

Table 1 presents the summary statistics of the variables I use in the models of value-relevance analysis, market value, analyst following measures and media coverage. Since media coverage data is only available from 2000 to 2018, and after merging with the I/B/E/S data for analyst following, the sample size reduced from 47,560 to 20,774 firm-year observations when these two variables are included in the regressions. Panel A shows the summary statistics for the full sample and Panel B shows the summary statistics for the after-merging sample. The two samples appear similar in descriptive statistics comparing with prior works on information content of cash flows. In our two samples, the mean values for OCF scaled by price are 0.131 and 0.127 compared to 0.145 reported in Rayburn (1986), 0.138 reported by Dechow (1994) and 0.145 reported in Cheng et al. (1996). Firms with media coverage and analyst following are generally larger in size with a mean of market value of $12263.41 million compared to $8284.484 million. The median market value of firms with media coverage and analyst following is 2,543 million, more than twice of the market value of the full sample. This is consistent with the view that larger firms attract more attention from the media and the financial analysts.

<Insert Table 1 here>

Table 2 presents the correlation matrix of all the variables in the paper. From the first column we can see that the most relevant variable is earnings change, followed by OCF level,

and then earnings level, and last is OCF change. Also, earnings level and OCF level are significantly correlated. For Panel A, the change in earnings and the level of OCF appear to be more positively correlated with abnormal returns with Pearson correlation of 0.2451 and 0.1943, respectively. However, these two variables are decreasing over the years with Pearson correlation of -0.0140 and -0.0243, respectively. The Pearson correlation between change in OCF scaled by beginning price and abnormal returns is 0.0547 for my sample. Livnat and Zarowin (1990) report value of 0.05 for this statistic. The market value of firms is negatively correlated with earnings change but positively correlated with OCF change.

<Insert Table 2 here>

4. Research Design and Methodology

I use multilinear regression models to estimate the explanatory power of unexpected accounting variables with respect to annual abnormal security returns. Following Ohlson and Shroff (1992); Ali and Zarowin (1992); Cheng, Liu and Shaefer (1996), I examine the value relevance of accounting variables including both level and change of earnings/OCF as the explanatory variables, but I also use only level or change of the accounting numbers for comparison. Specifically, I estimate the earnings' information content using the following earnings model:

$$AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}E_{jt} + Contr + \varpi_{jt} \quad (1)$$

where AR_{jt} stands for the annual abnormal return for firm j in year t. ΔE_{jt} (E_{jt}) is the change (level) of income before extraordinary items for firm j in year t.

I use the following cash flow model to examine the value relevance of OCF:

$$AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta CF_{jt} + \varphi_{2t}CF_{jt} + Contr + \varpi_{jt} \quad (2)$$

where ΔCF_{jt} (CF_{jt}) is the change (level) of OCF for firm j in year t.

I use the following total model to examine the value relevance of both earnings and OCF:

$$AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}\Delta CF_{jt} + \varphi_{3t}E_{jt} + \varphi_{4t}CF_{jt} + Contr + \varpi_{jt} \quad (3)$$

As discussed in Brown et al. (1987) and Ali and Zarowin (1992), the sum of the coefficients on level and change variables in a regression model is an estimate of the response coefficient on the construct which the proxies represent. To follow the convention, I name the coefficients as "response coefficients". The regression is based on annual return, the coefficients reflect the "association" between accounting information and the market return, not the market responses to the accounting information. However, I follow the popularity of the ERC term and use the term "response coefficient". That is, the sum of φ_{1t} and φ_{2t} in model (1) is the earnings response coefficient (*ERC*) using earnings model; the sum of φ_{1t} and φ_{2t} in model (2) is the cash flow response coefficient (*CRC*) using cash flow model; and the sum of $\varphi_{1t}(\varphi_{2t})$ and $\varphi_{3t}(\varphi_{4t})$ in model (3) is the earnings (cash flow) response coefficient using the total model. I refer the sum of *ERC* and *CRC* and total response coefficient (*TRC*). Various control variables (*Contr*) were used in my design, including industry or firm fixed effects and year fixed effects. I use both pooled and Fama-Macbeth regression methods to estimate value relevance of earnings and cash flows.

To investigate the cross-sectional difference in value relevance of earnings and OCF across firms with different quality of information environment, I first partition the sample into two groups based on the median of firm size, analyst following, and media coverage, and then estimate the models (1) to (3), with changes and/or levels of the accounting numbers for the two subsamples, respective. And then I compare the coefficients (*ERC, CRC, TRC*) across the subsamples.

I then examine the time trend of the value relevance of earnings and OCF by regressing the coefficients estimated from the first stage of Fama-Macbeth regressions on a time variable,

using the following regression model:

$$Coefficient = \varphi_{0t} + \varphi_{1t} Time + \varpi_{jt} \quad (4)$$

where *Time* ranges from 0 to 30 indicating the year from 1989 to 2019.

5. Empirical Results

5.1 Value Relevance of Earnings and OCF

5.1.1 Value Relevance of Earnings

First, I revisit the association between the changes and/or levels of current accounting earnings and the abnormal stock returns. I look at changes model, levels model, and models that include both changes and levels of current earnings with various specifications, including year fixed effect and industry or firm fixed effect. Both pooled regression results and Fama-Macbeth method results are examined, and the results corroborate with each other. The results are presented in Table 3. Generally, my results are consistent with previous literature, indicating that when we include both levels and changes of earnings in a simultaneously regression of annual returns on earnings, they both have explanatory power. The relation between ΔE_{jt} and returns is moderately lower than the previous literature in both the sign and the magnitude of the coefficients. For example, the coefficient of ΔE_{jt} is 0.642 for pooled regression and 0.668 for Fama-Macbeth method, which is about the same scale of the 0.74 reported in Easton and Harris (1991) but slightly lower. The detailed year-by-year results of the Fama-Macbeth method are presented in Appendix A. Interestingly, the relation between E_{jt} and returns levels is 0.141 in column (2), which is significantly lower than the magnitude reported in the previous literature using data before the 21st century. For instance, the coefficient is 1.02 in Easton and Harris (1991). The reduced information content of earnings is also reflected by a lower *ERC* ($\sum (\Delta E_{jt},\ E_{jt})$) comparing to the previous literature. My results

indicate a decreased association between earnings levels and stock returns over recent decades. The results in column (3) to (5) corroborates this trend showing significant negative coefficients of E_{jt}, which are positive in Easton and Harris (1991). The ERC are all significantly positive when we use both level and change model and decrease slightly when the models contain control variable. Fama-Macbeth regression shows similar result and have higher ERC than pooled regression.

<Insert Table 3 here>

5.1.2 Value Relevance of OCF

Similarly, I then examine the association between the changes and/or levels of current OCF and the abnormal stock returns. I look at changes model, levels model, and models that include both changes and levels of current earnings with various specifications, including year fixed effect and industry or firm fixed effect.

Table 4 of Panel A presents the results for the OCF model, model (2), by using pooled regression, which indicate that the changes and levels of OCF are positively associated with security returns. The OCF level could explain more than OCF change, the CRC are significantly positive in the pooled regression and show similar but higher coefficient using different fixed effect. Fama-Macbeth regression shows similar result. The adjusted R^2 for using just change of OCF (column (1)) is 0.012. The second column of Table 4 reports the pooled results for the level model, which indicate a positive relationship between the level of OCF and abnormal returns as well. The adjusted R^2 for the levels model is 0.036. The third column of Table 4 Panel A presents the pooled results for the total model including both changes and levels of OCF. The coefficients of change of OCF and level of OCF are significant and positive in the pooled regression and the sum of coefficients of change of OCF and level

of OCF ($CRC = \varphi_{1t} + \varphi_{2t}$) over the period 1989 to 2019 is 0.522 (0.066+0.456). The adjusted R^2 is 0.036. The third column of Table 4 confirm that the level of OCF and the change of OCF both have information content. In contrast to higher information content of change in earnings, the results in Table 4 indicate that the explanatory power of level of OCF is higher than that of change.

I also examine this relationship by using fixed effect for the period 1989-2019. The fourth column contains the results of the estimation of our regression models including the industry and year fixed effect. The coefficients on OCF and is statistically significant at the 1% level but not change of OCF. The cash flow response coefficient is 0.570(0.011+0.559). The adjusted R^2 in the fourth column is 0.076, which is higher than those of first three pooled regression model. Results of the fixed-effects regression after controlling year and firm fixed effect are reported in the last column of Table 4. We note from the last column that the CRC of the OCF model with firm and year fixed effects reached 0.684(-0.093+0.777). The explanatory power of the model that included both year and firm fixed effect is 0.063, which is lower than that of using year and industry fixed effect.

Panel B of Table 4 presents alternative estimates of the OCF Model by using the Fama and MacBeth (1973) methodology. The first column of Panel B presents that the changes of OCF is statistically significant at 1%. The second column of Panel B shows that the level of OCF is statistically significant. The third column presents that the return-cash flow model with both levels and changes are included. It shows that the explanatory power of Fama and Macbeth, as indicated by the adjusted R^2, is 4.6%.

<Insert Table 4 here>

5.1.3 Value Relevance of Earnings and Additional Value Relevance on OCF

Since earnings and OCF could substitute each other or complement each other in providing information to the investors, I then look at the information content of both accounting numbers combined. Still, I look at changes model, levels model, and models that include both changes and levels of current earnings and OCF with various specifications, including year fixed effect and industry or firm fixed effect.

Table 5 Panel A presents results for model (3) by using pooled regression, which indicate that the changes of earnings and OCF are associated with security returns positively. The adjusted R^2 for the change model is 0.067. The second column of Panel A reports the pooled results for the levels model, which indicate a positive relationship between the level of earnings and OCF. The adjusted R^2 is 0.036. The third column of Panel A presents the pooled results for the total model with both changes and levels of earnings and OCF. However, the coefficient of OCF changes is insignificant in the polled regression. The sum of coefficients of earnings and earnings change ($\varphi_{1t}+ \varphi_{3t}$) over the period from 1989 to 2019 is 0.472(0.611-0.139). Results also show that the sum of coefficients of level and changes variables in OCF ($\varphi_{2t}+ \varphi_{4t}$) is 0.402(0.011+0.391). We can see that ERC is higher than CRC but not too much, both are significantly positive. ERC becomes lower but CRC becomes higher when we have different fixed effects. The adjusted R^2 is 0.086. The third column of Panel A confirm that the level of earnings and OCF provides incremental information content beyond the changes of earnings and OCF. In the pooled analysis, we find the evidence that the coefficient of both level and change of earnings and OCF are significant at 1% except for cash flow changes in the third column of Panel A. Second, the results indicate that the explanatory power of change of earnings and OCF is higher than those of levels.

We show that both levels and changes for earnings and OCF are explanatory variables for stock returns. We re-examine this relationship by using fixed effect for the period 1989-2019. The fourth column contains the results of the re-estimation of our regression models

based on the industry and year fixed effect. The coefficients on earnings and earning changes are statistically significant at the 1% level. The earnings response coefficient is 0.443(0.614-0.171). The cash flows response coefficient is 0.450(0.488-0.038). The adjusted R^2 in the fourth column is 0.125, which is higher than those of pooled regression model. Results of the fixed-effects regression after controlling year and firm fixed effect are reported in the last column of Panel A. We note from the last column that the ERC of the model reached 0.383(0.618-0.235). The sum of the coefficients of cash flow is equal to 0.555 (0.683-0.128). The explanatory power of the model that included both year and firm fixed effect is 0.111, which is lower than that of using year and industry fixed effect.

Panel B of Table 5 presents alternative estimates of the total Model (3) by using the Fama and MacBeth (1973) methodology. The first column presents that both the changes of earnings and OCF are statistically significant at 1%. The second column of Panel B shows that the level of earnings and OCF are statistically significant. The third column presents that the return-earnings model with both levels and changes are included. It shows that the explanatory power of Fama and Macbeth has increases slightly, as indicated by the adjusted R^2 , by 22.4 percent (10.7 percent versus 8.6 percent).

<Insert Table 5 here>

5.2 Trend Analysis

I examine the time trend of the value relevance of earnings and OCF by regressing the coefficients estimated from the first stage of Fama-Macbeth regressions on a time variable and Table 6 presents my results. In Panel A, the coefficients of *Time* are all negative across the columns, suggesting the value relevance of earnings, no matter for changes, levels, or they combined, is decreasing over the years. For the economic significance, as *Time* increase by 1

year, the market reaction to ΔE will decrease by 0.012, which is 1.9% of the market reaction to ΔE in the pooled results of the change model (0.012/0.642). Although not statistically significant, as *Time* increase by 1 year, the market reaction to E will decrease by 0.011, which is 7.8% of the market reaction to E in the pooled results of the level model (0.011/0.141). Similarly, as *Time* increase by 1 year, the market reaction to ERC will decrease by 0.015, which is 2.6% of the *ERC* in the pooled results of the change model (0.015/0.573).

In Panel B, the coefficients of *Time* are negative for level of OCF and the combined model, suggesting the value relevance of OCF overall, is decreasing over the years, only the coefficient of level of OCF is statistic. However, when combined the change and the level variable, i.e., the CRC, does not decrease through time since -0.004 is not significant. For the economic significance, as *Time* increase by 1 year, the market reaction to CF will decrease by 0.01, which is 2.1% of the market reaction to CF in the pooled results of the level model (0.01/0.485). Although not statistically significant, as *Time* increase by 1 year, the market reaction to ΔCF_{jt} will increase by 0.001, which is 3.3% of the market reaction to ΔCF_{jt} in the pooled results of the change model (0.001/0.3). Similarly, as *Time* increase by 1 year, the market reaction to CRC will decrease by 0.004, which is 0.76% of the *CRC* in the pooled results of the change model (0.004/0.522).

In Panel C, the coefficients of Time are all negative across the columns. The first column shows that time increase by one year, the market reaction to total trend change will decrease to 0.008. As *Time* increase by one year, the market reaction to total trend will decrease to 0.017. Similarly, as *Time* increase by one year, the market reaction to TRC will decrease to 0.013. The third column reports a more complete model, it shows that the CRC does not decrease significantly through time, but the ERC does. Combined, TRC also does decrease over time.

Overall, the documented decline in the value relevance of earnings is consistent with my results. The value relevance of earnings does not increase or decrease as the value relevance of earnings decreasing suggesting that OCF is still providing information content but there are also other information sources that are providing supplementary information to the investors other than the OCF.

<Insert Table 6 here>

Besides, I did an adjusted R^2 trend analysis over the 31 years and the results are shown in Figure 1. We can see that all the R^2 trend decline and have no obvious difference among the three groups, no matter if we use earnings, OCF or both variable combined models. Therefore, I conclude that the explanatory power overall declines over the past 31 years but it's hard to figure out the supplementary role between earnings and OCF.

<Insert Figure 1 here>

I also did ERC and CRC trend analysis over the 31 years and the results are shown in Figure 2 and Figure 3. We can see that there's no obvious trend for ERC over the 31 years. However, when we look at CRC, we could see that OCF change coefficient increase slightly but mostly are positive for later half years. The OCF level coefficient decreases slightly overall but for most of the time are positive, which imply that OCF level is providing less and less but still positive additional value relevance, partially may be due to other information brought by OCF change.

<Insert Figure 2 here>

<Insert Figure 3 here>

5.3 Cross-sectional Analysis based on Information Environment

5.3.1 Firm size as proxy for information environment

To examine the information environment's effect on earnings relevance, we partition the sample based on the median of the firm size, analyst following, or media coverage, and the results are presented in Table 7, 8, 9, respectively. Panel A1 of Table 7 presents the value relevance of earnings for subsamples partitioned based firm size estimated using pooled OLS regressions. In column (1) and (2), the coefficient of change in earnings is higher when firm size is small, which is inconsistent with the general expectation that the earnings number should have better information content when information environment is better. Therefore, we should also include level of earnings in the model. Column (3) and (4) of Panel indicates that the market is more responsive to the earnings level when information environment is better. Column (5) and (6) take both change and level of earnings into account. The summation of the two coefficients ($ERC = \sum(\Delta E_{jt}, E_{jt})$) suggests that the value relevance of earnings is higher for larger firms.

<Insert Table 7 here>

Therefore, the results suggest significantly higher information content of earnings levels for subsample of large firms, and it is suggested that both level and change should be included in the model to capture the full information content of earnings. In Panel A2, the results estimated using Fama-Macbeth method corroborate the OLS regression results. The results are consistent with the hypothesis that coefficients (e.g., *ERC*) reflect the value increase per unit of earnings, which can be higher when the information environment improves the

quality of earnings. Panel B1 of Table 7 presents the value relevance of OCF for subsamples partitioned based on firm size estimated using pooled OLS regressions. The results suggest similar information content of cash flow levels and change of OCF for the two subsamples. In Panel B2, the results estimated using Fama-Macbeth method corroborate the OLS regression results, suggesting no difference in *CRC* for the two subsamples. Therefore, my result indicates the information content of OCF is less likely to be affected by the information environment. This is consistent with the notion that OCF are relatively less likely to be manipulated and therefore, its information content is less likely to be contingent on how well the firm is disclosing the information. I also find that the information content of OCF is higher than of earnings in the below-median subsample, suggesting when firms are small and information environment is poor, the OCF is providing supplementary information to earnings to help investors making decisions.

I then look at both the earnings and the OCF in Panel C1. Consistent with Panel A1 and B1, the information content for earnings is still significantly higher for larger firms, while the information content for OCF is insignificantly different for each subsample and the information content of OCF is higher than of earnings in the below-median subsample. For example, the ERC in column (6) (8) (10) are all higher than the ERC in column (5) (7) (9), while the CRC does not show a robust pattern across the columns. Note that after including the year and industry fixed effect in Panel C1, the coefficient on earnings for large firms is insignificant, as reported in column (8). In column (9) and (10), I consider the year and firm fixed effect. From column (9) of Table 7, the coefficient on the change of OCF is insignificant for small size firms. I find lower CRC when firm get larger. However, CRC become higher when firms get larger when we add control variables. Importantly, TRC is higher when firm get larger. I then use the Fama-Macbeth method and the results are shown in Panel C2 of Table 7. I investigate whether changes of earnings and OCF as well as the level of earnings and OCF jointly affect stock

returns for different size of firms. Column (1) to column (2) in Panel C2 reports the incremental information content of changes of earnings and OCF using pooled regression for both small and large size firms, respectively. The mean coefficient of ΔE_{jt} and ΔCF_{jt} are significant positive for both small and large size firms. The results suggest that earnings and OCF carry additional information beyond each other. In contrast, the coefficient of E in Colum (3) is insignificant for small firms when only level variables are used. Column (5) and column (6) reports the incremental information content of earnings and OCF for small and large size firms. Consistent with OLS pooled regression models, I continue to find that the incremental information content of earnings is higher for larger firms, while the information content of OCF is indifferent across subsamples. In addition, the information content of OCF is higher than of earnings in the below-median subsample, which is consistent with OCF playing a supplementary role to earnings. In conclusion, when firms get larger, ERC is higher, but CRC is ambiguous. The results here show that CRC is smaller when firms get larger. However, the total value relevance (TRC) is higher when firm get larger unambiguously. For robustness, if I focus on consistent results between the pooled and Fama-Mcbeth method, I can only conclude that when firms get larger, ERC is higher.

5.3.2 Analyst following as proxy for information environment

Panel A1 of Table 8 presents the value relevance of earnings for subsamples partitioned based on analyst following estimated using pooled OLS regressions. In column (5) to (10), the results suggest significantly higher information content of earnings (measured by *ERC*) for subsample of high analyst following firms. In Panel A2, the results estimated using Fama-Macbeth method corroborate the OLS regression results.

<Insert Table 8 here>

Panel B1 presents the value relevance of OCF for subsamples partitioned based on analyst following estimated using pooled OLS regressions. In column (5) to (10), the results suggest significantly higher information content of OCF levels for subsample of high analyst following firms. In Panel B2, the results estimated using Fama-Macbeth method corroborate the OLS regression results.

In Panel C1 of Table 8, I report the regression results for model that includes both earnings and OCF, Model (3), for subsample of firms with low or high number of analysts following. I follow the same research design as previous. Still, the combined change and level models is considered a better empirical model than the single change or level model. For the sake of completeness, I use both the change-only or the level- only and the combined model with fixed effect for firms with high and low analyst following. For column (1) and (2), the results shows that the changes of OCF have higher coefficient for firms with higher analyst following. The coefficient of E_{jt} is insignificant for firms with low analyst following as shown in column (3). I apply the regression analysis of a model including both changes and levels of variables, I find that the coefficients of $\Delta CF_{jt}$are insignificant for firms with low or high analyst following in column (5) and column (6). I then apply the regression analysis of a model including both changes and level of variables with different fixed effect. The summed coefficients for earnings $(\varphi_{1t}+\varphi_{3t})$ over the period 1989 to 2019 for firms with lower analyst following (0.731-0.289=0.442) are higher than those of firms with higher analyst following (0.609-0.188=0.421) after control the year and industry fixed effect. In contrast, the summed coefficients for OCF $(\varphi_{2t}+\varphi_{4t})$ are smaller for firms with lower analyst following (-0.058+0.520=0.462). The results are still hold after controlling year and firm fixed effect. Importantly, TRC are larger when firms are followed by more financial analysts. Results suggest that earnings have less value relevance when followed by more financial analysts, but OCF could provide more additional value relevance when a firm has more analyst followings.

In Panel C2, the results estimated using Fama-Macbeth method corroborate the OLS regression results. However, when we use Fama-Macbeth method, the results are inconsistent with pooled regression, both ERC and CRC are larger for high analyst following group. For robustness, if I focus on consistent results between the pooled and Fama-Macbeth method, I can only conclude that when firms are followed by more financial analysts, CRC is higher. However, unambiguously, TRC is larger when firms are followed by more financial analysts.

5.3.3 Media coverage as proxy for information environment

Table 9 reports regression results for tests of the incremental information content of earnings and OCF for high and low media coverage firms. For both high and low media coverage firm sub-samples, I find that the explanatory power is higher when both levels and changes of variables are jointly included. It shows that the explanatory power of Model (3) increases to 0.091 and 0.078 for lower and higher media coverage firms, respectively. Panel A1 presents the value relevance of earnings for subsamples partitioned based on media coverage estimated using pooled OLS regressions. The results suggest significantly higher information content of earnings levels for subsample of high media coverage firms. In Panel A2, the results estimated using Fama-Macbeth method corroborate the OLS regression results. From column (5) to column (6), the coefficient of OCF changes is insignificant. Column (7) to column (10) reports the incremental information content of earnings and OCF with different fixed effect. The results indicate that both the *ERC* and *CRC* are smaller for low media coverage firms compared those high media coverage firms. In Panel B1, the results indicate that both CRC are smaller for high media coverage firms compared those low media coverage firms. In Panel B2 of Table 9，I follow the same structure by using Fama-Macbeth regression. The summed coefficient of OCF is 0.490(0.097+0.393) for firms with lower media coverage in the column (5). The coefficient of OCF level is significant for both high and low media coverage firms. In Panel C1, I can find that ERC, CRC and TRC are all larger for higher media

coverage group and significantly positive, which means both the value relevance of earnings and the additional value relevance of OCF are even larger when a firm is followed by more media. In Panel C2 of Table 9, I follow the same structure by using Fama-Macbeth regression and shows the same result. Based on both the pooled and Fama-Macbeth method, I can reliably say that when firms are followed by more media, the value-relevance of earnings and the additional value-relevance of OCF are both improved. The summed coefficient of earnings is 0.364(0.580-0.216) for firms with lower media coverage in the column (5). The coefficient of OCF changes is insignificant for both high and low media coverage firms. Still, our results indicate higher value relevance of earnings, OCF or combined for firms with greater media coverage.

<Insert Table 9 here>

Taken together, my information environment measures (i.e., the size, the financial analysts following and the media) show that when information environment is better, the TRC is higher; however, the effect on ERC and CRC varies.

6. Summary and Conclusion

In this paper, I revisit the association between the changes and/or levels of current accounting earnings and the abnormal stock returns. My results are generally consistent with previous literature indicating that both earnings levels and changes have explanatory power when they are included in a simultaneously regression of annual returns on earnings. Results show that the relation between returns and earnings levels is significantly lower than the

magnitude reported in the previous literature using data before the 21st Century. The reduced information content of earnings is also reflected by a lower *ERC* comparing to the previous literature. The results indicate that the level of OCF and the change of OCF both have information content, and the explanatory power of change of OCF is higher than that of level. The level of earnings and OCF have incremental information content beyond the changes of earnings and OCF. The explanatory power of the model that included both year and firm fixed effect is lower than that of using year and industry fixed effect. Results also shows that the explanatory power of Fama-Macbeth has increases slightly than pooled regression model.

I then examine the time trend of the value relevance of earnings and OCF by regressing the coefficients estimated from the first stage of Fama-Macbeth regressions on a time variable. I find that the value relevance of earnings decreasing over the years while the value relevance of OCF remains unchanged. This result implies that although OCF consistently provides information content to the market, there are also other information sources that are providing useful information to the investors to compensate the decline in the information content of earnings.

To examine the information environment's effect on earnings relevance, I partition the sample based on the median of the firm size, analyst following, or media coverage**.** Results show that the value relevance of earnings and OCF are higher for large firms, firms with higher number of analysts following and firms with high media coverage. In addition, my results also suggest that the OCF is playing a supplementary role for earnings, however, the supplementary role is reduced when firms size and number of analysts following are larger. My findings suggest that when we examine value relevance of accounting profitability, we shall consider both earnings and OCF.

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Figures

Figure 1: This figure presents the picture of adjusted R^2 trend over the 31 years using Earnings, OCF and Earnings OCF combined model.

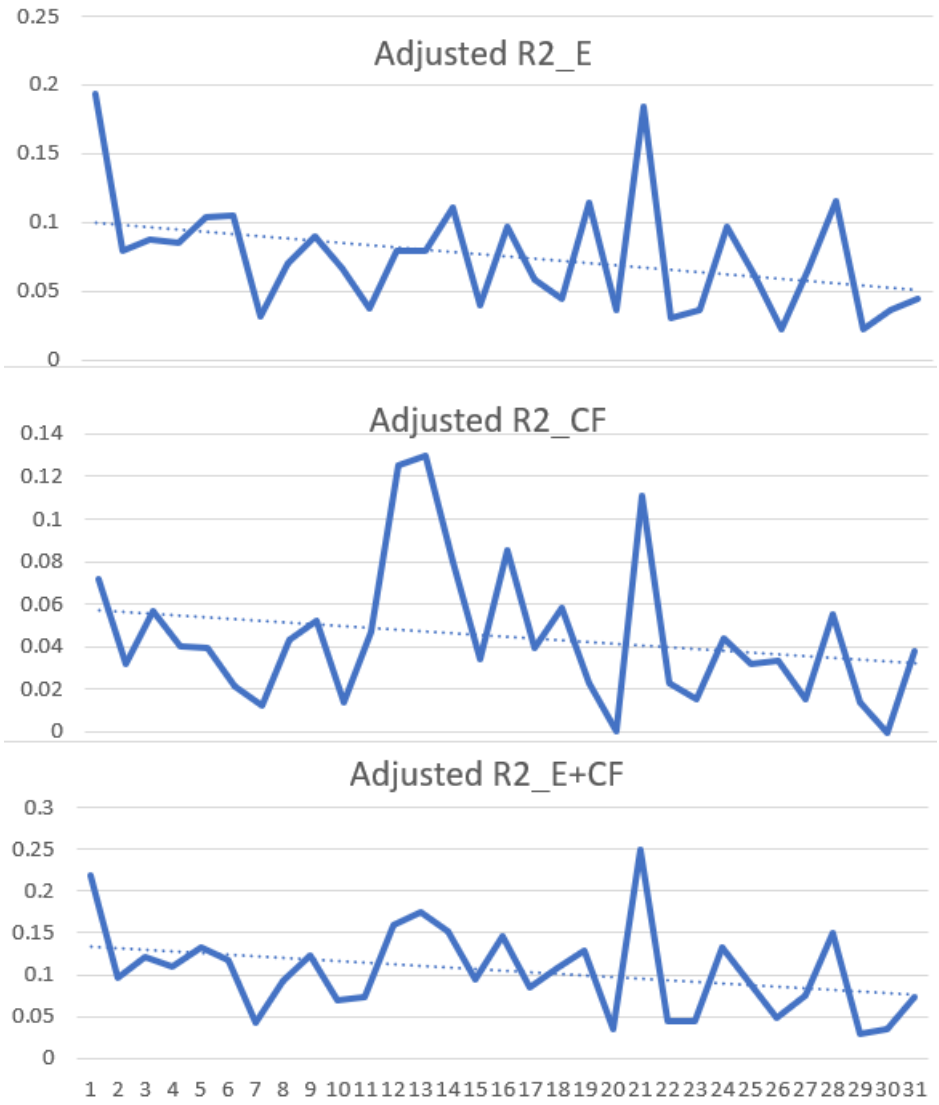


Figure 2: This figure presents the trend of ERC over the 31 years (φ_{1t} and φ_{3t}) of Model 3

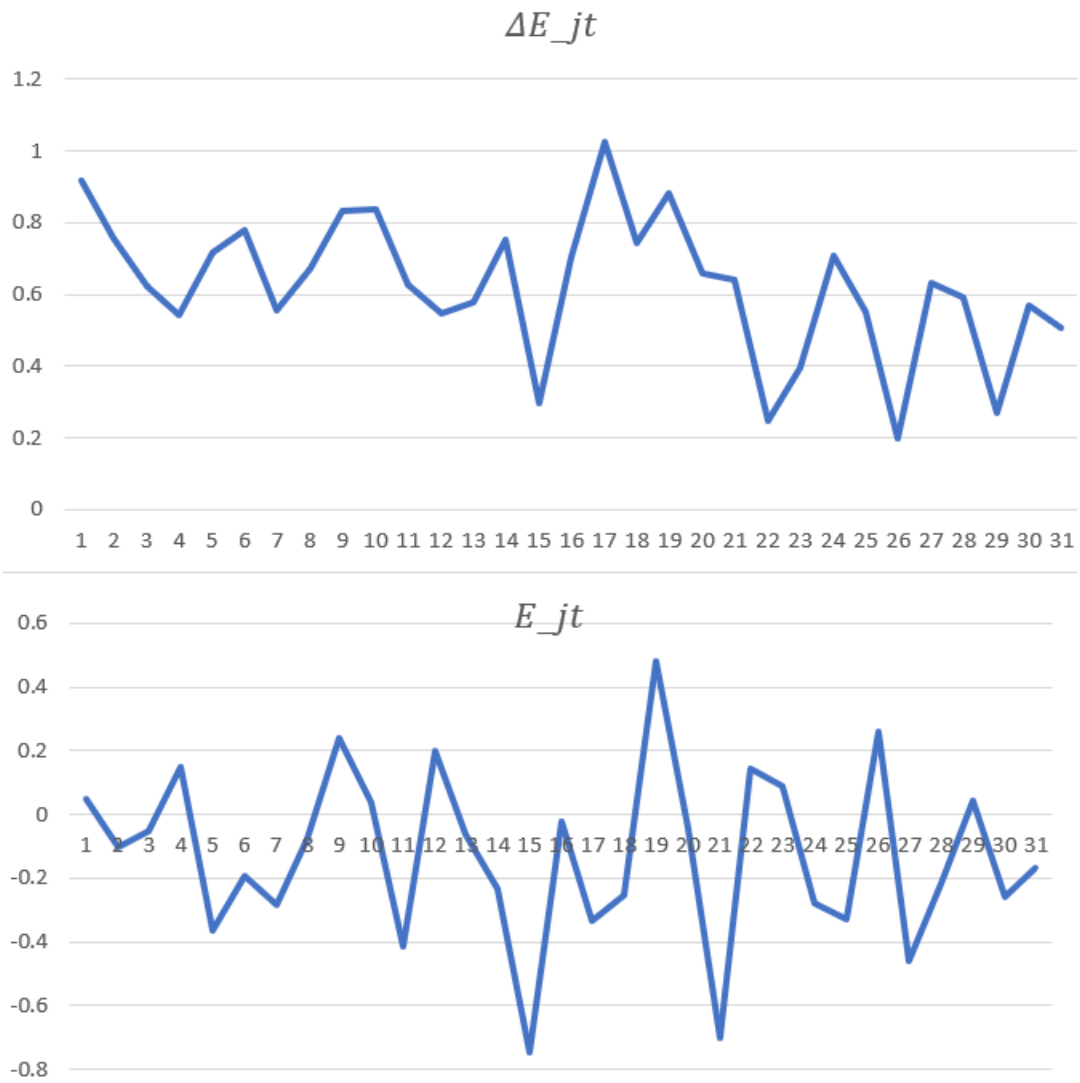
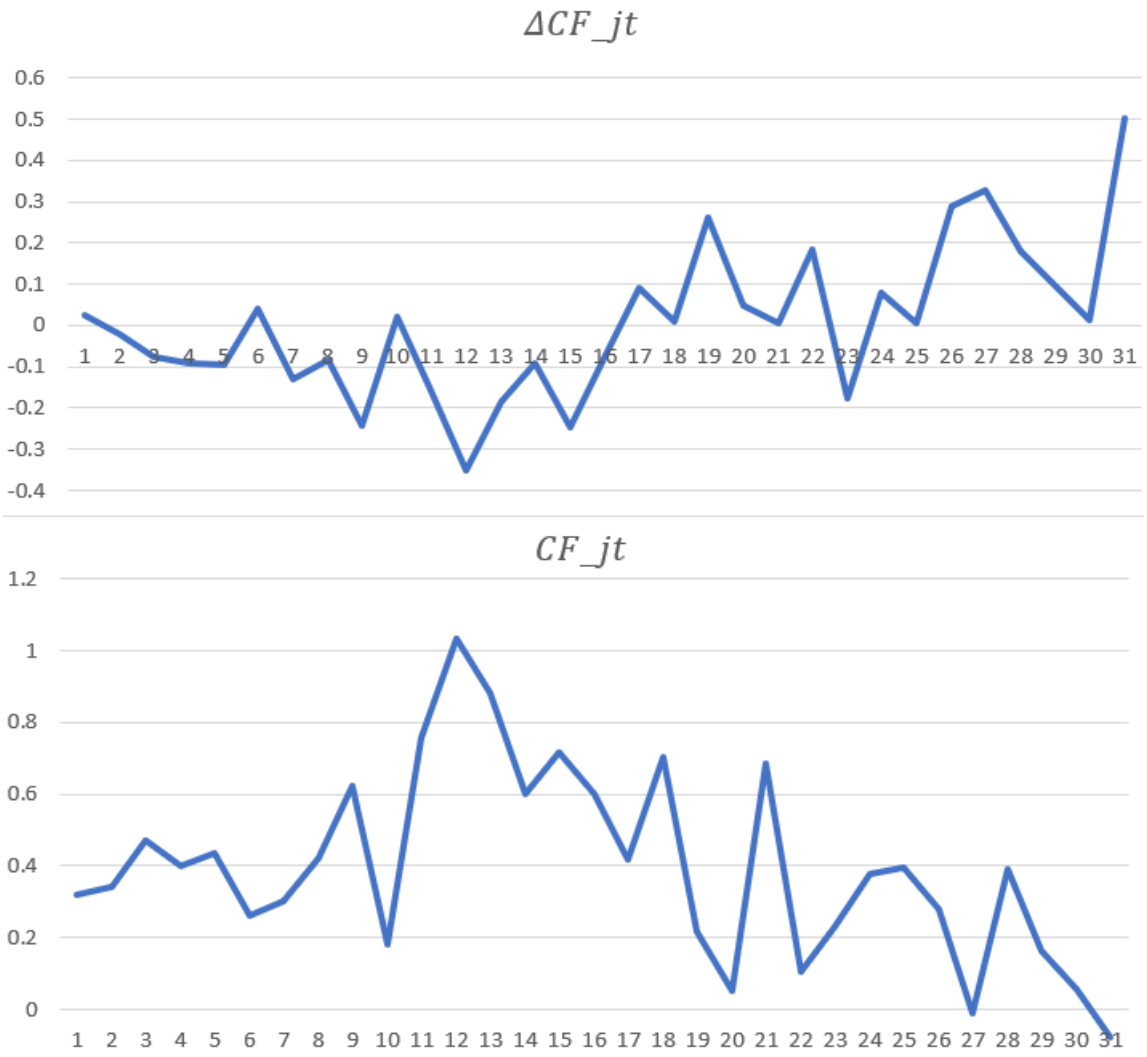


Figure 3: This figure presents the trend of CRC over the 31 years (φ_{2t} and φ_{4t}) of Model 3.



Tables

Table 1: Summary statistics

This table presents the summary statistics for our sample. Panel A(B) reports the statistics for the full sample (the sample with analyst following and media coverage). AR_{jt} is the abnormal annual return of firm j, starting from the fourth month of fiscal year t to the third month of year t+1, obtained from the market model. $E_{jt}(\Delta E_{jt})$, $CF_{jt}(\Delta CF_{jt})$ are level (change) in earnings and OCF for firm j in year t deflated by the equity market value at the beginning of year t. *MV* is the market value in million.

Panel A: Full sample

	N	Mean	Std. Dev.	Min.	Q1	Median	Q3	Max.
AR_{jt}	47,560	-0.016	0.394	-1.119	-0.229	-0.017	0.183	1.306
ΔE_{jt}	47,560	0.015	0.168	-0.598	-0.016	0.006	0.027	1.015
ΔCF_{jt}	47,560	0.010	0.156	-0.660	-0.025	0.007	0.041	0.715
E_{jt}	47,560	0.031	0.148	-0.863	0.024	0.057	0.084	0.336
CF_{jt}	47,560	0.132	0.169	-0.400	0.061	0.106	0.175	0.939
MV	47,560	8284	25551	0.042	287.9	1286	4813	508329

Panel B: Sample with media and analyst following

	N	Mean	Std. Dev.	Min.	Q1	Median	Q3	Max.
AR_{jt}	20774	-0.001	0.384	-2.753	-0.195	-0.004	0.176	4.176
ΔE_{jt}	20774	0.012	0.133	-0.540	-0.013	0.005	0.024	0.852
ΔCF_{jt}	20774	0.041	0.114	-0.746	0.029	0.055	0.079	0.411
E_{jt}	20774	0.008	0.129	-0.644	-0.020	0.006	0.034	0.691
CF_{jt}	20774	0.127	0.142	-0.379	0.064	0.101	0.161	0.920
MV	20774	12263	32481	3	856	2543	8435	504239
Media	20774	212	427	0	4	90	260	8223
Analyst	20774	4.45	5.05	1	1	2	6	42

Table 2: Correlation matrix

This table presents the Pearson correlation matrix. Panel A reports the Pearson correlation for variables we use in the models of value-relevance analysis and market value of the firms. AR_{jt} is the abnormal annual return for firm j, starting from the fourth month of fiscal year t to the third month of year t+1, obtained from the market model. $E_{jt}(\Delta E_{jt})$, $CF_{jt}(\Delta CF_{jt})$ are level (change) in earnings and OCF for firm j in year t deflated by equity market value at the beginning of year t. Significance level of 0.05 is printed and significance level of 0.01 is stared.

	AR_{jt}	ΔE_{jt}	ΔCF_{jt}	E_{jt}	CF_{jt}
AR_{jt}	1				
ΔE_{jt}	0.2451*	1			
ΔCF_{jt}	0.0547*	0.3478*	1		
E_{jt}	0.0991*	0.1585*	0.1247*	1	
CF_{jt}	0.1943*	0.1677*	0.1741*	0.4726*	1

Table 3: Value Relevance of Earnings

This table presents the value relevance of earnings using model $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}E_{jt} + Contr + \varpi_{jt}$. Pooled OLS regression results are presented in Panel A and Fama-Macbeth method results are presented in Panel B. *ERC* stands for the earnings response coefficient, which is sum of the coefficient for ΔE_{jt} and E_{jt}. Standard errors are clustered by firm (reported in parentheses). ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A: Pooled OLS regression

	(1)	(2)	(3)	(4)	(5)
ΔE_{jt}	0.642***		0.669***	0.678***	0.698***
	(0.011)		(0.012)	(0.026)	(0.028)
E_{jt}		0.141***	-0.096***	-0.130***	-0.205***
		(0.013)	(0.014)	(0.026)	(0.033)
Constant	-0.023***	-0.018***	-0.020***	-0.019***	-0.017***
	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)
ERC= $\sum(\Delta E_{jt}, E_{jt})$			0.573***	0.548***	0.492***
			(0.026)	(0.052)	(0.060)
Year FE				Y	Y
Industry FE				Y	
Firm FE					Y
Observations	47,560	47,560	47,560	47,438	47,254
Adj. R^2	0.062	0.002	0.063	0.096	0.074

Panel B: Fama-Macbeth regression

	(1)	(2)	(3)
ΔE_{jt}	0.668***		0.672***
	(0.042)		(0.037)
E_{jt}		0.218***	-0.059
		(0.064)	(0.049)
Constant	-0.023	-0.023	-0.023
	(0.015)	(0.014)	(0.014)
ERC= $\sum(\Delta E_{jt}, E_{jt})$			0.613***
			(0.086)
Observations	47,560	47,560	47,560
Adj. R^2	0.069	0.016	0.076

Table 4: Value relevance of OCF

This table presents the value relevance of earnings using model $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta CF + \varphi_{2t}CF_t + Contr + \varpi_{jt}$. Pooled OLS regression results are presented in Panel A and Fama-Macbeth method results are presented in Panel B. *CRC* stands for the earnings response coefficient, which is sum of the coefficient for ΔCF_{jt} and CF_{jt}. Standard errors are clustered by firm (reported in parentheses). ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A: Pooled OLS regression

	(1)	(2)	(3)	(4)	(5)
ΔCF_{jt}	0.300***		0.066***	0.011	-0.093***
	(0.013)		(0.014)	(0.025)	(0.027)
CF_{jt}		0.485***	0.456***	0.559***	0.777***
		(0.012)	(0.013)	(0.025)	(0.034)
Constant	-0.016***	-0.077***	-0.074***	-0.087***	-0.115***
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
CRC= $\sum(\Delta CF_{jt},\ CF_{jt})$			0.522***	0.570***	0.684***
			(0.027)	(0.050)	(0.062)
Year FE				Y	Y
Industry FE				Y	
Firm FE					Y
Observations	47,560	47,560	47,560	47,438	47,254
Adj. R^2	0.012	0.036	0.036	0.076	0.063

Panel B: Fama-Macbeth regression

	(1)	(2)	(3)
ΔCF_{jt}	0.300***		0.054*
	(0.027)		(0.031)
CF_{jt}		0.473***	0.454***
		(0.043)	(0.051)
Constant	-0.017	-0.079***	-0.077***
	(0.015)	(0.016)	(0.016)
CRC= $\sum(\Delta CF_{jt},\ CF_{jt})$			0.508***
			(0.082)
Observations	47,560	47,560	47,560
Adj. R^2	0.015	0.042	0.046

Table 5: Value Relevance of Earnings and OCF

This table presents the value relevance of earnings using model $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}\Delta CF_{jt} + \varphi_{3t}E_{jt} + \varphi_{4t}CF_{jt} + contr + \varpi_{jt}$. Results of pooled OLS regression are presented in Panel A, and Fama-Macbeth method are presented in Panel B. *TRC* stands for the total response coefficient, which is sum of the coefficients for levels and changes of both earnings and cash flow. Standard errors are clustered by firm (reported in parentheses). ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A: Pooled OLS regression

	(1)	(2)	(3)	(4)	(5)
ΔE_{jt}	0.614***		0.611***	0.614***	0.618***
	(0.012)		(0.012)	(0.026)	(0.028)
ΔCF_{jt}	0.195***		0.011	-0.038*	-0.128***
	(0.012)		(0.014)	(0.023)	(0.025)
E_{jt}		0.066***	-0.139***	-0.171***	-0.235***
		(0.013)	(0.014)	(0.026)	(0.033)
CF_{jt}		0.477***	0.391***	0.488***	0.683***
		(0.012)	(0.013)	(0.023)	(0.032)
Constant	-0.024***	-0.078***	-0.070***	-0.081***	-0.104***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)
ERC= $\sum(\Delta E_{jt},\ E_{jt})$			0.472***	0.443***	0.384***
			(0.026)	(0.053)	(0.061)
CRC= $\sum(\Delta CF_{jt},\ CF_{jt})$			0.402***	0.450***	0.555***
			(0.027)	(0.046)	(0.057)
TRC = ERC + CRC			0.874***	0.893***	0.939***
			(0.052)	(0.099)	(0.118)
Year FE				Y	Y
Industry FE				Y	
Firm FE					Y
Observations	47,560	47,560	47,560	47,438	47,254
Adj. R^2	0.067	0.036	0.086	0.125	0.111

Panel B: Fama-Macbeth regression

	(1)	(2)	(3)
ΔE_{jt}	0.637***		0.625***
	(0.041)		(0.035)
ΔCF_{jt}	0.197***		0.005
	(0.023)		(0.033)
E_{jt}		0.121*	-0.126**
		(0.062)	(0.049)
CF_{jt}		0.455***	0.398***
		(0.043)	(0.048)
Constant	-0.024	-0.083***	-0.075***
	(0.015)	(0.015)	(0.015)
$ERC = \sum (\Delta E_{jt},\ E_{jt})$			0.498***
			(0.084)
$CRC = \sum (\Delta CF_{jt},\ CF_{jt})$			0.403***
			(0.080)
TRC = ERC + CRC			0.901***
			(0.165)
Observations	47,560	47,560	47,560
Adj. R^2	0.76	0.54	0.107

Table 6: Trend Analysis

This table presents the value relevance of earnings using model $Coefficient = \varphi_{0t} + \varphi_{1t} Time + \varpi_{jt}$. Panel A/B/C respectively presents the time trend analysis for value relevance of earnings, OCF and both. Column (1), (2), and (3) respectively reports the results for the change, level, and total model. Standard errors are clustered by firm (reported in parentheses). ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A: Value Relevance of Earnings			
	ΔE_{jt}	E_{jt}	$\sum(\Delta E_{jt}, E_{jt})$
	(1)	(2)	(3)
Time	-0.012***	-0.011	-0.015**
	(0.004)	(0.007)	(0.006)
Constant	0.850***	0.379***	0.838***
	(0.073)	(0.123)	(0.110)
Observations	31	31	31
Adj. R^2	0.198	0.041	0.134
Panel B: Value Relevance of OCF			
	ΔCF_{jt}	CF_{jt}	$\sum(\Delta CF_{jt}, CF_{jt})$
	(1)	(2)	(3)
Time	0.001	-0.010**	-0.004
	(0.003)	(0.005)	(0.004)
Constant	0.284***	0.623***	0.569***
	(0.053)	(0.080)	(0.075)
Observations	31	31	31
Adj. R^2	-0.030	0.113	-0.003
Panel C: Value Relevance of both Earnings and OCF			
	$\sum(\Delta E_{jt}, \Delta CF_{jt})$	$\sum(E_{jt}, CF_{jt})$	$\sum(\Delta E_{jt}, E_{jt}, \Delta CF_{jt}, CF_{jt})$
	(1)	(2)	(3)
Time	-0.008	-0.017**	-0.013*
	(0.005)	(0.007)	(0.007)
Constant	0.951***	0.835***	1.089***
	(0.095)	(0.124)	(0.125)
Observations	31	31	31
Adj. R^2	0.035	0.141	0.064

Table 7: Conditional on Size

Table 7 Panel A1 (A2) presents the value relevance of earnings for subsamples partitioned based on firm size and estimated using pooled OLS regressions (Fama-Macbeth method). Panel B1 (B2) presents the value relevance of OCF for subsamples partitioned based on firm size and estimated using pooled OLS regressions (Fama-Macbeth method). Panel C1 (C2) presents the value relevance of both earnings and OCF for subsamples partitioned based on firm size and estimated using pooled OLS regressions (Fama-Macbeth method). Small and Large refers to the subsample of firms with firm size below the median or above the median, respectively. ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A1; Pooled OLS; ERC

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large	(7) Small	(8) Large	(9) Small	(10) Large
ΔE_{jt}	0.652***	0.587***			0.697***	0.527***	0.702***	0.543***	0.728***	0.523***
	(0.019)	(0.029)			(0.020)	(0.032)	(0.020)	(0.031)	(0.022)	(0.033)
E_{jt}			0.064***	0.449***	-0.172***	0.183***	-0.187***	0.102**	-0.282***	0.104**
			(0.023)	(0.036)	(0.023)	(0.039)	(0.025)	(0.040)	(0.030)	(0.044)
Constant	-0.014***	-0.032***	-0.002	-0.050***	-0.016***	-0.041***	-0.016***	-0.036***	-0.016***	-0.037***
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
ERC					0.525***	0.710***	0.515***	0.645***	0.445***	0.627***
					(0.043)	(0.071)	(0.045)	(0.071)	(0.052)	(0.077)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	14,706	14,699	14,706	14,699	14,706	14,699	14,662	14,613	14,368	14,469
Adj. R2	0.072	0.027	0.000	0.010	0.075	0.029	0.104	0.112	0.069	0.092

Panel A2; Fama Macbeth; ERC

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large
ΔE_{jt}	0.651***	0.590***			0.666***	0.589***
	(0.052)	(0.090)			(0.051)	(0.093)
E_{jt}			0.168*	0.434***	-0.098	0.074
			(0.082)	(0.130)	(0.063)	(0.122)
Constant	-0.013	-0.032	-0.005	-0.051**	-0.017	-0.037
	(0.022)	(0.022)	(0.022)	(0.022)	(0.021)	(0.022)
ERC					0.567***	0.662***
					(0.113)	(0.216)
Observations	14706	14699	14706	14699	14706	14699
Adj. R2	0.074	0.040	0.018	0.018	0.085	0.048

Panel B1; Pooled OLS; Cash Flow

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large	(7) Small	(8) Large	(9) Small	(10) Large
ΔCF_{jt}	0.404***	0.324***			0.166***	-0.000	0.120***	-0.149***	0.001	-0.274***
	(0.024)	(0.029)			(0.027)	(0.033)	(0.027)	(0.033)	(0.030)	(0.035)
CF_{jt}			0.548***	0.546***	0.477***	0.546***	0.556***	0.825***	0.827***	1.083***
			(0.022)	(0.025)	(0.025)	(0.029)	(0.028)	(0.032)	(0.036)	(0.038)
Constant	-0.005	-0.030***	-0.072***	-0.092***	-0.064***	-0.092***	-0.074***	-0.123***	-0.106***	-0.154***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.005)	(0.006)	(0.005)
CRC					0.643***	0.546***	0.676***	0.676***	0.828***	0.808***
					(0.052)	(0.062)	(0.055)	(0.065)	(0.066)	(0.073)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	14,706	14,699	14,706	14,699	14,706	14,699	14,662	14,613	14,368	14,469
Adj. R2	0.019	0.008	0.040	0.032	0.042	0.032	0.073	0.133	0.048	0.129

Panel B2; Fama Macbeth; Cash Flow

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large
ΔCF_{jt}	0.394***	0.316***			0.180***	-0.007
	(0.041)	(0.040)			(0.053)	(0.058)
CF_{jt}			0.478***	0.528***	0.409***	0.542***
			(0.062)	(0.066)	(0.073)	(0.085)
Constant	-0.005	-0.030	-0.069***	-0.092***	-0.063***	-0.094***
	(0.022)	(0.022)	(0.020)	(0.023)	(0.020)	(0.025)
CRC					0.589***	0.535***
					(0.126)	(0.142)
Observations	14706	14699	14706	14699	14706	14699
Adj. R2	0.023	0.011	0.043	0.043	0.051	0.047

Panel C1; Pooled OLS; TRC

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large	(7) Small	(8) Large	(9) Small	(10) Large
ΔE_{jt}	0.613***	0.552***			0.628***	0.449***	0.635***	0.448***	0.642***	0.416***
	(0.020)	(0.029)			(0.020)	(0.031)	(0.020)	(0.031)	(0.022)	(0.032)
ΔCF_{jt}	0.275***	0.248***			0.099***	-0.042	0.057**	-0.181***	-0.044	-0.298***
	(0.024)	(0.029)			(0.026)	(0.033)	(0.027)	(0.033)	(0.029)	(0.035)
E_{jt}			-0.015	0.355***	-0.218***	0.141***	-0.235***	0.053	-0.323***	0.065
			(0.023)	(0.036)	(0.023)	(0.039)	(0.024)	(0.039)	(0.029)	(0.043)
CF_{jt}			0.550***	0.515***	0.405***	0.486***	0.479***	0.762***	0.714***	1.018***
			(0.022)	(0.025)	(0.024)	(0.029)	(0.027)	(0.032)	(0.035)	(0.038)
Constant	-0.016***	-0.034***	-0.072***	-0.107***	-0.067***	-0.096***	-0.077***	-0.123***	-0.105***	-0.153***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
$ERC = \sum(\Delta E_{jt},\ E_{jt})$					0.410***	0.590***	0.401***	0.501***	0.319***	0.481***
					(0.043)	(0.070)	(0.045)	(0.069)	(0.051)	(0.075)
$CRC = \sum(\Delta CF_{jt},\ CF_{jt})$					0.504***	0.444***	0.536***	0.582***	0.670***	0.720***
					(0.051)	(0.062)	(0.054)	(0.065)	(0.064)	(0.073)
$TRC = ERC + CRC$					0.915***	1.034***	0.937***	1.082***	0.989***	1.201***
					(0.094)	(0.132)	(0.098)	(0.135)	(0.116)	(0.148)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	14,706	14,699	14,706	14,699	14,706	14,699	14,662	14,613	14,368	14,469
Adj. R2	0.080	0.032	0.040	0.038	0.102	0.051	0.132	0.150	0.108	0.144

Panel C2; Fama Macbeth; TRC

	(1) Small	(2) Large	(3) Small	(4) Large	(5) Small	(6) Large
ΔE_{jt}	0.611***	0.551***			0.615***	0.552***
	(0.051)	(0.086)			(0.049)	(0.091)
ΔCF_{jt}	0.280***	0.239***			0.113*	-0.038
	(0.038)	(0.030)			(0.057)	(0.058)
E_{jt}			0.067	0.332***	-0.171**	0.004
			(0.086)	(0.111)	(0.069)	(0.116)
CF_{jt}			0.472***	0.494***	0.363***	0.495***
			(0.065)	(0.060)	(0.073)	(0.075)
Constant	-0.015	-0.034	-0.072***	-0.106***	-0.068***	-0.093***
	(0.021)	(0.022)	(0.020)	(0.024)	(0.019)	(0.025)
$ERC = \sum(\Delta E_{jt},\ E_{jt})$					0.445***	0.556***
					(0.118)	(0.207)
$CRC = \sum(\Delta CF_{jt},\ CF_{jt})$					0.476***	0.457***
					(0.130)	(0.134)
$TRC = ERC + CRC$					0.920***	1.012***
					(0.248)	(0.340)
Observations	14706	14699	14706	14699	14706	14699
Adj. R2	0.086	0.047	0.059	0.055	0.120	0.084

Table 8: Conditional on Analyst Following

Table 8 Panel A1 (A2) presents the value relevance of earnings for subsamples partitioned based on analyst following estimated using pooled OLS regressions (Fama-Macbeth method). Panel B1 (B2) presents the value relevance of OCF for subsamples partitioned based on analyst following estimated using pooled OLS regressions (Fama-Macbeth method). Panel C1 (C2) presents the value relevance of both earnings and OCF for subsamples partitioned based on analyst following estimated using pooled OLS regressions (Fama-Macbeth method). Low and High refers to the subsample of firms with analyst following below or above the median, respectively. ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A1; Pooled OLS; ERC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔE_{jt}	0.741***	0.652***			0.801***	0.680***	0.803***	0.694***	0.872***	0.678***
	(0.023)	(0.021)			(0.024)	(0.023)	(0.024)	(0.023)	(0.028)	(0.025)
E_{jt}			0.062**	0.234***	-0.221***	-0.087***	-0.255***	-0.146***	-0.391***	-0.184***
			(0.027)	(0.026)	(0.028)	(0.028)	(0.029)	(0.028)	(0.039)	(0.034)
Constant	-0.019***	-0.030***	-0.010***	-0.035***	-0.012***	-0.026***	-0.011***	-0.024***	-0.005	-0.021***
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
ERC					0.580***	0.593***	0.547***	0.548***	0.481***	0.494***
					(0.052)	(0.051)	(0.054)	(0.051)	(0.067)	(0.059)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	12815	19607	12815	19607	12815	19607	12776	19547	12262	19131
Adj. R2	0.075	0.046	0.000	0.004	0.079	0.046	0.108	0.104	0.098	0.093

Panel A2; Fama Macbeth; ERC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔE_{jt}	0.784***	0.775***			0.807***	0.750***
	(0.053)	(0.069)			(0.041)	(0.061)
E_{jt}			0.245**	0.416***	-0.109	0.016
			(0.093)	(0.087)	(0.072)	(0.070)
Constant	-0.016	-0.034*	-0.019	-0.050***	-0.016	-0.037**
	(0.016)	(0.017)	(0.016)	(0.017)	(0.016)	(0.017)
ERC					0.698***	0.766***
					(0.113)	(0.132)
Observations	12,815	19,607	12,815	19,607	12,815	19,607
Adj. R2	0.080	0.058	0.026	0.022	0.095	0.066

Panel B1; Pooled OLS; Cash Flow

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔCF_{jt}	0.308***	0.324***			0.047*	0.053**	-0.010	-0.023	-0.215***	-0.141***
	(0.024)	(0.022)			(0.027)	(0.024)	(0.027)	(0.024)	(0.031)	(0.027)
CF_{jt}			0.519***	0.545***	0.498***	0.524***	0.590***	0.681***	0.932***	0.968***
			(0.021)	(0.019)	(0.024)	(0.022)	(0.027)	(0.024)	(0.036)	(0.031)
Constant	-0.011***	-0.027***	-0.079***	-0.093***	-0.077***	-0.091***	-0.089***	-0.110***	-0.132***	-0.145***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.004)
CRC					0.546***	0.576***	0.581***	0.658***	0.717***	0.827***
					(0.051)	(0.046)	(0.053)	(0.048)	(0.067)	(0.058)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	12,815	19,607	12,815	19,607	12,815	19,607	12,776	19,547	12,262	19,131
Adj. R2	0.013	0.011	0.044	0.040	0.044	0.040	0.079	0.107	0.081	0.115

Panel B2; Fama Macbeth; Cash Flow

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔCF_{jt}	0.322***	0.332***			0.043	0.013
	(0.048)	(0.040)			(0.056)	(0.050)
CF_{jt}			0.530***	0.567***	0.518***	0.565***
			(0.061)	(0.056)	(0.070)	(0.069)
Constant	-0.009	-0.031*	-0.081***	-0.102***	-0.082***	-0.103***
	(0.016)	(0.017)	(0.015)	(0.018)	(0.016)	(0.018)
CRC					0.562***	0.579***
					(0.126)	(0.119)
Observations	12,815	19,607	12,815	19,607	12,815	19,607
Adj. R2	0.021	0.016	0.058	0.053	0.068	0.059

Panel C1; Pooled OLS; TRC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔE_{jt}	0.710***	0.617***			0.727***	0.606***	0.731***	0.609***	0.770***	0.571***
	(0.023)	(0.021)			(0.024)	(0.023)	(0.024)	(0.023)	(0.028)	(0.025)
ΔCF_{jt}	0.197***	0.228***			-0.007	0.007	-0.058**	-0.059**	-0.222***	-0.159***
	(0.023)	(0.022)			(0.026)	(0.024)	(0.026)	(0.024)	(0.030)	(0.026)
E_{jt}			-0.007	0.140***	-0.252***	-0.135***	-0.289***	-0.188***	-0.380***	-0.227***
			(0.027)	(0.026)	(0.027)	(0.027)	(0.029)	(0.028)	(0.038)	(0.033)
CF_{jt}			0.520***	0.531***	0.427***	0.461***	0.520***	0.611***	0.806***	0.881***
			(0.021)	(0.019)	(0.024)	(0.021)	(0.026)	(0.024)	(0.035)	(0.030)
Constant	-0.021***	-0.032***	-0.079***	-0.098***	-0.068***	-0.082***	-0.079***	-0.098***	-0.112***	-0.128***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.005)
$ERC= \sum (\Delta E_{jt},\ E_{jt})$					0.476***	0.471***	0.442***	0.421***	0.390***	0.344***
					(0.051)	(0.050)	(0.053)	(0.050)	(0.065)	(0.058)
$CRC= \sum (\Delta CF_{jt},\ CF_{jt})$					0.419***	0.468***	0.463***	0.552***	0.584***	0.723***
					(0.049)	(0.045)	(0.052)	(0.048)	(0.065)	(0.057)
$TRC = ERC + CRC$					0.895***	0.939***	0.905***	0.973***	0.974***	1.067***
					(0.101)	(0.095)	(0.105)	(0.098)	(0.130)	(0.115)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	12,815	19,607	12,815	19,607	12,815	19,607	12,776	19,547	12,262	19,131
Adj. R2	0.080	0.051	0.044	0.041	0.108	0.074	0.142	0.140	0.147	0.143

Panel C2; Fama Macbeth; TRC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔE_{jt}	0.742***	0.740***			0.743***	0.697***
	(0.051)	(0.065)			(0.041)	(0.056)
ΔCF_{jt}	0.218***	0.225***			-0.012	-0.036
	(0.043)	(0.034)			(0.047)	(0.054)
E_{jt}			0.146	0.291***	-0.175***	-0.064
			(0.089)	(0.079)	(0.063)	(0.060)
CF_{jt}			0.513***	0.536***	0.460***	0.504***
			(0.059)	(0.054)	(0.063)	(0.064)
Constant	-0.019	-0.036**	-0.089***	-0.115***	-0.077***	-0.098***
	(0.015)	(0.017)	(0.016)	(0.017)	(0.016)	(0.017)
$ERC = \sum(\Delta E_{jt},\ E_{jt})$					0.569***	0.633***
					(0.105)	(0.116)
$CRC = \sum(\Delta CF_{jt},\ CF_{jt})$					0.449***	0.467***
					(0.110)	(0.118)
$TRC = ERC + CRC$					1.018***	1.101***
					(0.215)	(0.234)
Observations	12,815	19,607	12,815	19,607	12,815	19,607
Adj. R2	0.091	0.066	0.080	0.069	0.143	0.108

Table 9: Conditional on Media Coverage

Table 9 Panel A1 (A2) presents the value relevance of earnings for subsamples partitioned based on media coverage estimated using pooled OLS regressions (Fama-Macbeth method). Panel B1(B2) presents the value relevance of OCF for subsamples partitioned based on media coverage estimated using pooled OLS regressions (Fama-Macbeth method). Panel C1 (C2) presents the value relevance of both earnings and OCF for subsamples partitioned based on media coverage estimated using pooled OLS regressions (Fama-Macbeth method). Low and High refers to the subsample of firms with media coverage below the median or above the median, respectively. ***, **, and * respectively represents significance at less than 1%, %5, and 10% levels, with two-tailed tests.

Panel A1; Pooled OLS; ERC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔE_{jt}	0.607***	0.592***			0.646***	0.602***	0.652***	0.625***	0.641***	0.670***
	(0.021)	(0.021)			(0.022)	(0.023)	(0.022)	(0.023)	(0.024)	(0.024)
E_{jt}			0.022	0.217***	-0.172***	-0.031	-0.218***	-0.118***	-0.297***	-0.242***
			(0.025)	(0.025)	(0.025)	(0.026)	(0.027)	(0.027)	(0.033)	(0.031)
Constant	0.010**	-0.021***	0.023***	-0.024***	0.011**	-0.020***	0.011**	-0.017***	0.010**	-0.012***
	(0.004)	(0.003)	(0.005)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
ERC					0.474***	0.571***	0.434***	0.508***	0.344***	0.428***
					(0.047)	(0.049)	(0.049)	(0.050)	(0.058)	(0.055)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	11,474	16,313	11,474	16,313	11,474	16,313	11,436	16,293	11,164	16,111
Adj. R^2	0.066	0.045	-0.000	0.005	0.070	0.046	0.103	0.087	0.061	0.075

Panel A2; Fama Macbeth; ERC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔE_{jt}	0.592***	0.609***			0.619***	0.581***
	(0.050)	(0.087)			(0.056)	(0.079)
E_{jt}			0.082	0.278**	-0.144**	0.015
			(0.082)	(0.116)	(0.067)	(0.097)
Constant	0.017	-0.023	0.025	-0.031*	0.016	-0.025
	(0.023)	(0.020)	(0.023)	(0.018)	(0.024)	(0.019)
ERC					0.475***	0.596***
					(0.123)	(0.176)
Observations	11,474	16,313	11,474	16,313	11,474	16,313
Adj. R^2	0.069	0.056	0.013	0.026	0.081	0.069

Panel B1; Pooled OLS; Cash Flow

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔCF_{jt}	0.301***	0.340***			0.105***	0.034	0.047*	-0.061**	-0.066**	-0.179***
	(0.026)	(0.024)			(0.028)	(0.027)	(0.028)	(0.027)	(0.032)	(0.029)
CF_{jt}			0.462***	0.607***	0.420***	0.592***	0.500***	0.777***	0.744***	1.008***
			(0.023)	(0.022)	(0.026)	(0.025)	(0.028)	(0.028)	(0.037)	(0.034)
Constant	0.021***	-0.018***	-0.038***	-0.088***	-0.033***	-0.087***	-0.043***	-0.108***	-0.076***	-0.135***
	(0.005)	(0.003)	(0.005)	(0.004)	(0.006)	(0.004)	(0.006)	(0.004)	(0.007)	(0.005)
CRC					0.525***	0.625***	0.547***	0.715***	0.678***	0.828***
					(0.054)	(0.052)	(0.057)	(0.055)	(0.069)	(0.063)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	11,474	16,313	11,474	16,313	11,474	16,313	11,436	16,293	11,164	16,111
Adj. R2	0.012	0.012	0.033	0.045	0.034	0.045	0.070	0.097	0.044	0.091

Panel B2; Fama Macbeth; Cash Flow

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔCF_{jt}	0.298***	0.334***			0.097*	0.016
	(0.049)	(0.042)			(0.051)	(0.061)
CF_{jt}			0.430***	0.572***	0.393***	0.575***
			(0.076)	(0.075)	(0.088)	(0.097)
Constant	0.026	-0.019	-0.035	-0.091***	-0.032	-0.092***
	(0.023)	(0.020)	(0.021)	(0.023)	(0.021)	(0.023)
CRC					0.489***	0.592***
					(0.139)	(0.158)
Observations	11,474	16,313	11,474	16,313	11,474	16,313
Adj. R2	0.017	0.016	0.042	0.053	0.047	0.057

Panel C1; Pooled OLS; TRC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) High	(9) Low	(10) High
ΔE_{jt}	0.580***	0.561***			0.589***	0.533***	0.594***	0.554***	0.561***	0.579***
	(0.022)	(0.021)			(0.022)	(0.023)	(0.022)	(0.022)	(0.024)	(0.024)
ΔCF_{jt}	0.184***	0.259***			0.043	0.002	-0.007	-0.085***	-0.092***	-0.179***
	(0.025)	(0.023)			(0.027)	(0.026)	(0.028)	(0.027)	(0.031)	(0.029)
E_{jt}			-0.060**	0.140***	-0.223***	-0.071***	-0.260***	-0.165***	-0.313***	-0.265***
			(0.025)	(0.024)	(0.025)	(0.026)	(0.027)	(0.026)	(0.033)	(0.030)
CF_{jt}			0.471***	0.592***	0.360***	0.525***	0.431***	0.714***	0.631***	0.914***
			(0.024)	(0.022)	(0.025)	(0.025)	(0.028)	(0.028)	(0.037)	(0.034)
Constant	0.009**	-0.023***	-0.038***	-0.092***	-0.035***	-0.081***	-0.044***	-0.100***	-0.070***	-0.119***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.004)	(0.006)	(0.005)
ERC					0.366***	0.461***	0.335***	0.390***	0.247***	0.314***
					(0.047)	(0.048)	(0.049)	(0.049)	(0.057)	(0.054)
CRC					0.403***	0.527***	0.424***	0.629***	0.540***	0.735***
					(0.053)	(0.051)	(0.055)	(0.054)	(0.068)	(0.062)
TRC					0.769***	0.988***	0.759***	1.019***	0.787***	1.049***
					(0.100)	(0.100)	(0.104)	(0.103)	(0.125)	(0.117)
Year FE							Yes	Yes	Yes	Yes
Industry FE							Yes	Yes		
Firm FE									Yes	Yes
Observations	11,474	16,313	11,474	16,313	11,474	16,313	11,436	16,293	11,164	16,111
Adj. R2	0.071	0.053	0.033	0.047	0.091	0.078	0.126	0.131	0.093	0.128

Panel C2; Fama Macbeth; TRC

	(1) Low	(2) High	(3) Low	(4) High	(5) Low	(6) High
ΔE_{jt}	0.564***	0.569***			0.580***	0.548***
	(0.048)	(0.083)			(0.053)	(0.075)
ΔCF_{jt}	0.177***	0.259***			0.032	-0.006
	(0.045)	(0.032)			(0.062)	(0.064)
E_{jt}			-0.018	0.179	-0.216***	-0.070
			(0.079)	(0.107)	(0.068)	(0.096)
CF_{jt}			0.433***	0.547***	0.340***	0.528***
			(0.075)	(0.073)	(0.090)	(0.089)
Constant	0.016	-0.024	-0.038*	-0.097***	-0.033	-0.088***
	(0.023)	(0.020)	(0.021)	(0.022)	(0.020)	(0.021)
ERC					0.364***	0.478***
					(0.121)	(0.171)
CRC					0.372**	0.521***
					(0.152)	(0.153)
TRC					0.735***	0.999***
					(0.273)	(0.324)
Observations	11,474	16,313	11,474	16,313	11,474	16,313
Adj. R2	0.077	0.066	0.053	0.073	0.112	0.113

Appendix: Fama-Macbeth Results by Years

1. Fama-Macbeth Results of Value Relevance of Earnings by Years

This table presents the value relevance of earnings using change model (Panel A), level model (Panel B) or model including both change and level of earnings (Panel C): $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}E_{jt} + Contr + \varpi_{jt}$.

Panel A: value relevance of earnings using the change model

ΔE_{jt}	Intercept	Adj. R2	Year	N
1.025	0.002	0.192	1989	1234
0.795	-0.022	0.079	1990	1329
0.688	-0.162	0.087	1991	1428
0.626	-0.035	0.081	1992	1490
0.678	-0.071	0.089	1993	1518
0.790	0.005	0.103	1994	1531
0.445	-0.012	0.028	1995	1515
0.742	0.036	0.071	1996	1560
1.032	0.048	0.083	1997	1522
0.906	-0.112	0.068	1998	1557
0.643	-0.230	0.035	1999	1535
0.881	0.210	0.073	2000	1478
0.722	0.067	0.079	2001	1477
0.820	-0.159	0.108	2002	1540
0.234	0.115	0.007	2003	1551
0.823	-0.006	0.096	2004	1548
0.928	-0.033	0.058	2005	1596
0.673	0.011	0.045	2006	1565
1.217	0.012	0.104	2007	1495
0.634	-0.095	0.036	2008	1493
0.714	-0.063	0.124	2009	1532
0.308	-0.025	0.028	2010	1567
0.455	-0.020	0.035	2011	1594
0.650	-0.003	0.093	2012	1639
0.551	-0.090	0.056	2013	1600
0.295	0.025	0.011	2014	1608
0.473	0.036	0.037	2015	1615
0.669	-0.027	0.114	2016	1607
0.318	-0.039	0.021	2017	1613
0.480	-0.005	0.031	2018	1669
0.493	-0.055	0.039	2019	1554

Panel B: value relevance of earnings using the level model

E_{jt}	Intercept	Adj. R2	Year	N
0.413	-0.007	0.026	1989	1234
0.193	-0.030	0.004	1990	1329
0.213	-0.160	0.007	1991	1428
0.335	-0.023	0.017	1992	1490
-0.108	-0.051	0.001	1993	1518
0.049	0.027	0.000	1994	1531
0.120	-0.011	0.001	1995	1515
0.510	0.022	0.021	1996	1560
0.998	0.005	0.061	1997	1522
0.659	-0.131	0.024	1998	1557
0.160	-0.224	0.001	1999	1535
0.671	0.192	0.037	2000	1478
0.131	0.066	0.001	2001	1477
0.230	-0.150	0.005	2002	1540
-0.504	0.140	0.028	2003	1551
0.523	-0.007	0.027	2004	1548
0.398	-0.043	0.012	2005	1596
0.183	0.011	0.002	2006	1565
1.078	-0.033	0.082	2007	1495
0.312	-0.117	0.011	2008	1493
-0.578	-0.020	0.042	2009	1532
0.185	-0.017	0.006	2010	1567
0.252	-0.025	0.009	2011	1594
0.172	-0.002	0.005	2012	1639
-0.080	-0.077	0.000	2013	1600
0.404	0.016	0.019	2014	1608
-0.165	0.030	0.005	2015	1615
-0.164	-0.001	0.004	2016	1607
0.195	-0.037	0.006	2017	1613
0.003	-0.001	-0.001	2018	1669
-0.018	-0.057	-0.001	2019	1554

Panel C: value relevance of earnings using the model with both change and level

ΔE_{jt}	E_{jt}	*Intercept*	Adj. R2	Year	N
1.000	0.087	-0.002	0.193	1989	1234
0.821	-0.082	-0.019	0.079	1990	1329
0.696	-0.026	-0.162	0.087	1991	1428
0.591	0.174	-0.038	0.085	1992	1490
0.757	-0.328	-0.064	0.104	1993	1518
0.809	-0.141	0.010	0.105	1994	1531
0.549	-0.226	-0.001	0.032	1995	1515
0.722	0.048	0.034	0.070	1996	1560
0.783	0.459	0.026	0.090	1997	1522
0.877	0.063	-0.114	0.067	1998	1557
0.734	-0.265	-0.220	0.037	1999	1535
0.747	0.333	0.196	0.080	2000	1478
0.751	-0.113	0.069	0.080	2001	1477
0.877	-0.177	-0.156	0.111	2002	1540
0.315	-0.560	0.131	0.040	2003	1551
0.777	0.128	-0.010	0.097	2004	1548
1.073	-0.214	-0.025	0.059	2005	1596
0.669	0.018	0.010	0.044	2006	1565
0.887	0.499	-0.009	0.114	2007	1495
0.662	-0.042	-0.095	0.036	2008	1493
0.770	-0.697	-0.066	0.184	2009	1532
0.297	0.153	-0.030	0.031	2010	1567
0.424	0.091	-0.023	0.036	2011	1594
0.719	-0.170	0.002	0.097	2012	1639
0.591	-0.226	-0.083	0.062	2013	1600
0.181	0.336	0.017	0.022	2014	1608
0.671	-0.436	0.038	0.067	2015	1615
0.666	-0.138	-0.026	0.116	2016	1607
0.293	0.077	-0.040	0.022	2017	1613
0.562	-0.245	-0.001	0.036	2018	1669
0.566	-0.207	-0.053	0.045	2019	1554

2. Fama-Macbeth Results of Value Relevance of OCF by Years

This table presents the value relevance of OCF using change model (Panel A), level model (Panel B) or model including both change and level of OCF (Panel C): $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta CF_{jt} + \varphi_{2t}CF_{jt} + Contr + \varpi_{jt}$.

Panel A: value relevance of OCF using the change model

ΔCF_{jt}	*Intercept*	Adj. R2	Year	N
0.340	0.011	0.028	1989	1234
0.172	-0.026	0.004	1990	1329
0.280	-0.160	0.013	1991	1428
0.180	-0.016	0.005	1992	1490
0.264	-0.057	0.011	1993	1518
0.273	0.025	0.011	1994	1531
0.066	-0.005	0.000	1995	1515
0.280	0.045	0.010	1996	1560
0.285	0.056	0.009	1997	1522
0.313	-0.109	0.007	1998	1557
0.343	-0.222	0.009	1999	1535
0.548	0.217	0.031	2000	1478
0.506	0.050	0.035	2001	1477
0.357	-0.148	0.017	2002	1540
0.089	0.122	0.000	2003	1551
0.559	0.009	0.041	2004	1548
0.486	-0.029	0.025	2005	1596
0.453	0.016	0.027	2006	1565
0.351	0.006	0.011	2007	1495
0.124	-0.122	0.000	2008	1493
0.219	-0.024	0.006	2009	1532
0.271	-0.008	0.016	2010	1567
-0.001	-0.016	-0.001	2011	1594
0.341	0.000	0.022	2012	1639
0.252	-0.082	0.009	2013	1600
0.432	0.027	0.022	2014	1608
0.378	0.028	0.015	2015	1615
0.350	-0.004	0.015	2016	1607
0.228	-0.033	0.008	2017	1613
0.020	-0.001	-0.001	2018	1669
0.529	-0.063	0.037	2019	1554

Panel B: value relevance of OCF using the level model

CF_{jt}	*Intercept*	Adj. R2	Year	N
0.510	-0.064	0.068	1989	1234
0.446	-0.090	0.033	1990	1329
0.544	-0.258	0.058	1991	1428
0.462	-0.085	0.040	1992	1490
0.459	-0.117	0.040	1993	1518
0.352	-0.016	0.021	1994	1531
0.261	-0.041	0.012	1995	1515
0.497	-0.017	0.043	1996	1560
0.617	-0.017	0.050	1997	1522
0.409	-0.149	0.014	1998	1557
0.751	-0.313	0.047	1999	1535
1.029	0.077	0.123	2000	1478
0.905	-0.085	0.130	2001	1477
0.753	-0.261	0.080	2002	1540
0.465	0.048	0.031	2003	1551
0.696	-0.071	0.085	2004	1548
0.534	-0.082	0.035	2005	1596
0.638	-0.045	0.056	2006	1565
0.519	-0.042	0.023	2007	1495
0.116	-0.135	0.000	2008	1493
0.865	-0.204	0.110	2009	1532
0.269	-0.048	0.016	2010	1567
0.260	-0.046	0.013	2011	1594
0.429	-0.054	0.041	2012	1639
0.409	-0.131	0.032	2013	1600
0.422	-0.013	0.024	2014	1608
0.105	0.019	0.001	2015	1615
0.570	-0.078	0.054	2016	1607
0.248	-0.060	0.013	2017	1613
0.015	-0.003	-0.001	2018	1669
0.103	-0.071	0.002	2019	1554

Panel C: value relevance of OCF using both change and level model

ΔCF_{jt}	CF_{jt}	*Intercept*	Adj. R2	Year	N
0.141	0.451	-0.056	0.072	1989	1234
-0.009	0.450	-0.090	0.032	1990	1329
-0.022	0.555	-0.259	0.057	1991	1428
-0.065	0.489	-0.089	0.040	1992	1490
0.006	0.456	-0.116	0.039	1993	1518
0.098	0.303	-0.011	0.021	1994	1531
-0.095	0.300	-0.045	0.012	1995	1515
-0.073	0.535	-0.020	0.043	1996	1560
-0.173	0.714	-0.027	0.052	1997	1522
0.090	0.361	-0.144	0.014	1998	1557
-0.107	0.807	-0.319	0.047	1999	1535
-0.228	1.165	0.061	0.125	2000	1478
-0.093	0.956	-0.090	0.130	2001	1477
0.012	0.748	-0.260	0.080	2002	1540
-0.189	0.548	0.035	0.034	2003	1551
0.101	0.642	-0.066	0.085	2004	1548
0.241	0.409	-0.070	0.039	2005	1596
0.162	0.557	-0.038	0.058	2006	1565
0.093	0.462	-0.038	0.023	2007	1495
0.086	0.073	-0.130	0.000	2008	1493
-0.101	0.900	-0.210	0.111	2009	1532
0.192	0.190	-0.036	0.023	2010	1567
-0.131	0.305	-0.052	0.015	2011	1594
0.160	0.361	-0.046	0.044	2012	1639
0.054	0.389	-0.129	0.032	2013	1600
0.306	0.308	-0.002	0.033	2014	1608
0.386	-0.024	0.031	0.015	2015	1615
0.135	0.528	-0.073	0.055	2016	1607
0.116	0.199	-0.055	0.014	2017	1613
0.016	0.010	-0.002	-0.001	2018	1669
0.572	-0.085	-0.052	0.038	2019	1554

3. Fama-Macbeth Results of Value Relevance of Earnings and OCF by Years

This table presents the value relevance of earnings and OCF using change model (Panel A), level model (Panel B) or model including both change and level of earnings and OCF (Panel C): $AR_{jt} = \varphi_{0t} + \varphi_{1t}\Delta E_{jt} + \varphi_{2t}\Delta CF_{jt} + \varphi_{3t}E_{jt} + \varphi_{4t}CF_{jt} + Contr + \varpi_{jt}$.

Panel A: value relevance of earnings and OCF using the change model

ΔE_{jt}	ΔCF_{jt}	*Intercept*	Adj. R2	Year	N
0.985	0.152	0.001	0.197	1989	1234
0.784	0.108	-0.024	0.080	1990	1329
0.661	0.172	-0.164	0.092	1991	1428
0.616	0.110	-0.035	0.083	1992	1490
0.656	0.108	-0.072	0.090	1993	1518
0.770	0.175	0.002	0.107	1994	1531
0.444	0.011	-0.012	0.028	1995	1515
0.715	0.187	0.033	0.075	1996	1560
1.003	0.164	0.047	0.085	1997	1522
0.882	0.129	-0.112	0.068	1998	1557
0.599	0.201	-0.232	0.038	1999	1535
0.775	0.293	0.208	0.080	2000	1478
0.645	0.352	0.054	0.095	2001	1477
0.789	0.122	-0.160	0.110	2002	1540
0.232	0.008	0.115	0.006	2003	1551
0.727	0.339	-0.008	0.109	2004	1548
0.833	0.343	-0.036	0.069	2005	1596
0.612	0.380	0.008	0.063	2006	1565
1.223	0.365	0.005	0.116	2007	1495
0.630	0.069	-0.095	0.036	2008	1493
0.705	0.131	-0.065	0.126	2009	1532
0.279	0.226	-0.022	0.039	2010	1567
0.463	-0.064	-0.020	0.035	2011	1594
0.619	0.252	-0.005	0.104	2012	1639
0.529	0.153	-0.091	0.059	2013	1600
0.262	0.409	0.026	0.031	2014	1608
0.430	0.275	0.034	0.045	2015	1615
0.654	0.277	-0.028	0.123	2016	1607
0.299	0.189	-0.039	0.027	2017	1613
0.480	0.003	-0.005	0.030	2018	1669
0.448	0.477	-0.061	0.069	2019	1554

Panel B: value relevance of earnings and OCF using the level model

E_{jt}	CF_{jt}	*Intercept*	Adj. R2	Year	N
0.316	0.472	-0.075	0.083	1989	1234
0.135	0.434	-0.092	0.034	1990	1329
0.148	0.529	-0.258	0.061	1991	1428
0.289	0.437	-0.087	0.053	1992	1490
-0.176	0.480	-0.115	0.044	1993	1518
-0.024	0.355	-0.015	0.020	1994	1531
0.056	0.253	-0.043	0.012	1995	1515
0.340	0.433	-0.028	0.052	1996	1560
0.817	0.472	-0.043	0.088	1997	1522
0.576	0.307	-0.160	0.031	1998	1557
-0.095	0.770	-0.311	0.047	1999	1535
0.413	0.948	0.069	0.136	2000	1478
0.128	0.905	-0.087	0.131	2001	1477
0.055	0.743	-0.260	0.080	2002	1540
-0.723	0.650	0.042	0.084	2003	1551
0.305	0.636	-0.078	0.094	2004	1548
0.241	0.485	-0.088	0.039	2005	1596
-0.049	0.648	-0.043	0.056	2006	1565
1.012	0.372	-0.069	0.094	2007	1495
0.314	0.127	-0.130	0.011	2008	1493
-0.609	0.883	-0.207	0.156	2009	1532
0.159	0.256	-0.052	0.021	2010	1567
0.196	0.222	-0.049	0.018	2011	1594
0.059	0.416	-0.054	0.041	2012	1639
-0.204	0.449	-0.128	0.037	2013	1600
0.332	0.363	-0.017	0.036	2014	1608
-0.170	0.116	0.018	0.006	2015	1615
-0.229	0.593	-0.079	0.061	2016	1607
0.152	0.225	-0.061	0.016	2017	1613
0.000	0.015	-0.003	-0.001	2018	1669
-0.019	0.103	-0.071	0.001	2019	1554

Panel C: value relevance of earnings and OCF using both change and level model

ΔE_{jt}	ΔCF_{jt}	E_{jt}	CF_{jt}	*Intercept*	Adj. R2	Year	N
0.917	0.024	0.049	0.319	-0.049	0.219	1989	1234
0.755	-0.023	-0.104	0.340	-0.069	0.096	1990	1329
0.624	-0.075	-0.053	0.471	-0.247	0.122	1991	1428
0.544	-0.091	0.150	0.400	-0.095	0.110	1992	1490
0.717	-0.095	-0.363	0.436	-0.120	0.133	1993	1518
0.779	0.041	-0.194	0.263	-0.021	0.117	1994	1531
0.554	-0.131	-0.285	0.301	-0.038	0.043	1995	1515
0.673	-0.083	-0.079	0.423	-0.014	0.093	1996	1560
0.834	-0.244	0.240	0.623	-0.036	0.123	1997	1522
0.838	0.022	0.037	0.180	-0.131	0.069	1998	1557
0.629	-0.159	-0.414	0.755	-0.306	0.073	1999	1535
0.548	-0.350	0.201	1.035	0.063	0.159	2000	1478
0.579	-0.184	-0.064	0.881	-0.074	0.174	2001	1477
0.751	-0.091	-0.235	0.599	-0.244	0.151	2002	1540
0.296	-0.245	-0.748	0.716	0.024	0.095	2003	1551
0.703	-0.078	-0.024	0.601	-0.077	0.147	2004	1548
1.024	0.090	-0.334	0.419	-0.064	0.084	2005	1596
0.744	0.011	-0.253	0.702	-0.049	0.107	2006	1565
0.882	0.261	0.480	0.218	-0.035	0.129	2007	1495
0.659	0.050	-0.045	0.050	-0.100	0.035	2008	1493
0.642	0.007	-0.702	0.686	-0.204	0.249	2009	1532
0.249	0.186	0.145	0.105	-0.041	0.044	2010	1567
0.397	-0.175	0.089	0.229	-0.049	0.044	2011	1594
0.709	0.080	-0.278	0.379	-0.046	0.133	2012	1639
0.553	0.005	-0.327	0.395	-0.127	0.090	2013	1600
0.196	0.287	0.260	0.278	-0.008	0.049	2014	1608
0.631	0.327	-0.460	-0.011	0.037	0.076	2015	1615
0.591	0.181	-0.221	0.392	-0.075	0.150	2016	1607
0.271	0.095	0.043	0.164	-0.057	0.030	2017	1613
0.567	0.012	-0.257	0.057	-0.007	0.035	2018	1669
0.508	0.502	-0.167	-0.080	-0.049	0.073	2019	1554