(How) Has Earnings Recognition Timeliness changed over time?

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Abstract:
The recognition of economic news into accounting earnings represent a combination of the conservatism principle and the matching principle. The coefficient of a regression of earnings on returns represents the timely recognition of gains and losses and the matching of economic news over multiple fiscal periods. Previous research has shown that timely loss recognition and matching has changed over time, but not in a comprehensive regression analysis. We combine timely loss recognition and matching in one regression framework to examine changes over time. Furthermore, we add free cash flows to include the effect of unconditional conservatism in the regression framework. Our results show that timely loss recognition and matching of economic news has remained constant over time. However, the role of unconditional conservatism in the recognition of economic news has increased dramatically over the recent years.

1. Introduction

This paper examines earnings recognition timeliness (hereafter ERT), which is defined as the extent in which economic income in the fiscal period is recognized in the annual accounting income number (Ball and Easton 2013). Reported earnings are the end result of procedures and techniques employed by accountants, for instance by employing (non)operating assets to adjust free cash flows generated by operations, in order to measure economic performance over short horizons. Earnings are considered especially important when transitory cash flows are noisy performance measures due to timing problems (Dechow 1994; Dechow Rischardson and Sloan 2008). Research shows that the properties of accounting earnings for performance measurement have changed dramatically over time (Ball and Shivakumar 2006; Basu 1997; Bushman et al. 2016; Dichev and Tang 2008; Donelson et al. 2011; Givoly and Hayn 2000; Srivastava 2014). However, whether this change is the result of the use of operating assets to match expenses to revenues to record earnings, or the use of nonoperating assets to recognize expectations of future cash flows over time to record earnings, remains unclear. We employ a returns-based methodology to comprehensively examine the changes in the properties of earnings over time, and show that, while the properties of earnings that measure economic income have not changed over time, the role of free cash flows in earnings recognition has increased dramatically in recent years.

Two complementary accounting adjustments to cash flows are relevant for our setting. First, conditional conservatism has historically been a fundamental attribute of General Accepted Accounting Principles (GAAP), employed to improve earnings as measure of performance, as reflected in asymmetric accounting rules such as the lower-of-cost-or-

market method for inventories and the various asset impairment rules for long-term tangible and intangible assets, as well as audit practices such as the tendency of auditors to require a higher threshold of verification for good news than for bad news (Kothari et al. 2010). Prior research suggest that changes in accounting standards and their implementation, as well as changes in management reporting incentives, have been reflected in an increase in reporting conservatism over the last four decades (Givoly, Hayn and Katz 2017). The increase in conditional conservatism has largely been interpreted as an increase in earnings quality ((Ball and Shivakumar 2005; Francis, LaFond, Ollsen and Schipper 2004). Empirically, a consistent results first documented by Basu (1997) is that accounting income recognizes bad news about firm value more timely than good news, due to the conservatism principle in accounting.[1]

However, the increased timeliness of earnings for bad news comes at the cost of lower earnings persistence. As Basu (1997, 19) notes, "timeliness and persistence are different ways of viewing the same phenomenon. More timeliness means that more current value relevant news is recognized contemporaneously in earnings, leaving less current value relevant news to be recognized in future earnings. More persistence means that less current value relevant news is reported in current earnings, and more of it will be reported in future earnings." Dichev and Tang (2008, 1438) argue that the accounting adjustment of matching of revenues and expenses may be reduced, as "conservatism can be viewed as a form of "poor matching," where the expenses precede the associated revenues". They show that poor matching results is reflected by the lower contemporaneous association between revenues and expenses. Srivastava (2014) suggest

[1] This type of conservatism has also been referred to as news-dependent conservatism, highlighting to role of economic news (Ryan 2006). Conditional conservatism is the more timely recognition of economic losses relative to economic gains, where empirically, economic gains and losses are measured using stock returns (Ball, Kothari and Nikolaev 2013a; 2013b).

that poor matching results in the lower relevance of earnings, documented by for instance Collins, Maydew and Weiss (1997) and Lev and Zarowin (1999).

The matching principle is another fundamental attribute of GAAP, with the central goal of improving reported earnings as measure of performance (Dechow 1994). Dichev and Tang (2008, 1439) state, that "these two interpretations are often two different lenses through which to view the same effects, and whether one adopts one versus the other partly depends on the goals and the particular needs of the user." However, lower matching of expenses to revenues in the period in which they are earned has largely been interpreted as lower earnings quality over time (Dichev and Tang, 2008; Srivastava, 2014).

This paper examines the recognition of economic news in earnings (i.e. ERT) over time by examining changes in the ERT for both the conservatism principle and the matching principle. In addition, we further dissect conservatism into conditional conservatism and unconditional conservatism within one earnings-return framework, as suggested by Easton (2016).[2] While matching increases the persistence of earnings, conditional and unconditional conservatism decrease the persistence of earnings. Our analysis combines the conservatism principle and the matching principle in a single earnings-return framework.

To increase our understanding of these fundamental attributes of financial accounting, we use two recently developed models that dissect the earnings-return relation. First, the model of Ball and Easton (2013) dissects the change in market value to measure timely recognition of losses and matching simultaneously in an earnings-return framework. They show that intra-year returns can be estimated to separate expenses employed for

[2] Note that Easton and Pae (2004) added unconditional conservatism to a returns-earnings framework. This framework was used by Givoly et al. (2007, 98) to examine the association between Easton and Pae's (2004) cash-based unconditional conservatism and Basu's (1997) conditional conservatism. Based on Beaver and Ryan (2000), Qiang (2007) also estimate unconditional conservatism and conditional conservatism within a single regression framework. However, he employs book-to-market (BM) as the dependent variable, while we focus on the earnings-return relation to estimate the ERT. We refer to Patatoukas and Thomas (2011, fn 14, 1787) for a discussion of the use of BM to measure conditional conservatism.

matching to revenues from expenses used for timely recognition of economic news about future revenues. In addition, they show that the extent in which news on expenses is matched to the news on revenues depends on the sign of the news. Second, the model of Easton, Vassello and Weisbrod (2019) show that free cash flow can be added to the earnings-return regression to measure the effect of unconditional conservatism on earnings recognition. Furthermore, they show that this incremental effect depends on the sign of both news and free cash flows. In this paper, we combine the insights from these two models to comprehensively examine the changes in the properties of earnings over time. Our results show that the timely loss recognition component has increased in time only for a small subset of observations, and that the matching component of the earnings recognition timeliness has not changed over time, inconsistent with an increase in conditional conservatism over time. However, the explanatory power of free cash flow for earnings as proxy for unconditional conservatism has increased dramatically over recent period, suggesting an increased relevance of unconditional conservatism in financial reporting.

Our findings have the following implications for future research. First, we show the importance of free cash flow in the examination of earnings timeliness. Free cash flows serve as a proxy for the effects on unconditional conservatism on current and future earnings. Furthermore. the sign of free cash flows interact with the sign of returns. Our results indicate that regression of earnings on free cash flows and the sign of free cash flows can be used to examine unconditional conservatism, and that free cash flows can be included in examinations of conditional conservatism. Our approach is different from papers that examine potential confounding effects, such as Banker, Basu, Byzalov and Chen (2016), in that we show an incremental effect.

Second, we add to the literature that examine changes in financial reporting properties over time. We show that properties of reporting interact, and that these interactions should be included in any examination over time, such as Dichev and Tang (2008).

Finally, our result show that the articulation of the income statement can be used to better understand the sources of changes in financial reporting over time. Our results with regards to changes in conservatism show that operating assets are driving changes over time, and that operating assets are subject to unconditional conservatism. This is different from paper that examine changes in non-operating assets, such as Givoly and Hayn (2000).

Our results are also of interest to standard setters. Prior research suggested that earnings have lost relevance over time, and the a big source of the relevance lost is due to the increasing role of intangibles in the economy. Our result confirm this conjecture, and show that free cash flow serves as a substitute to accrual-based earnings. As standard setters attempt to improve the relevance for financial reporting, our results indicate that accounting under the principles of unconditional conservatism for intangibles requires improvement.

2. Research Design

In this section, we describe the two earnings-return models that are used in this paper. In section 2.1, we describe how the earnings-return model can be used to empirically estimate the matching of news on expenses to news on sales. Section 2.2 describes how free cash flow can be added to the earnings-return model to measure news that is unconditional conservative, and it effects on earnings recognition. Section 2.3 provides predictions.

2.1 Conditional conservatism and Matching

Our objective is to measure the total recognition of news in earnings (ERT) as the sum of end-of period timeliness and intra-year matching. Our starting point is the perspective of

Dichev and Tang (2008, 1427) of a firm as an entity that continually advances expenses to generate revenues. Earnings are the excess of revenues over the expenses to earn it, and the expected economic performance is equal to the required rate of return *r*, where competitive forces do not allow the entity to earn a profit margin on revenue higher than the cost of capital. In a certainty setting, the economic value of the entity would be equal to the (1+*r*/*r*) times the expense, and earnings would be *r* times the expense.

In order to elaborate on our research design, we use the analogy of a savings account without retained interest to reflect a certainty setting (Ohlson 1991; Easton 2009). In this setting, earnings are a constant of expenses advanced to earn interest, where the expense is the amount deposited in the savings account, and revenues is the interest on the amount deposited. Under certainty, earnings provides information on the profit margin on revenues over the life of the savings account.

For contracting purposes, a periodic statement of performance of the savings account is required, rather than reporting performance on the deposit over the life of the savings account (Dechow, 1994). Based on transitory nature of the cash inflow into the deposit at origination of the account, relative to the subsequent revenues from interest on the deposit, a cash-based measure of economic performance would yield a loss of (1-r) times the expense in the first year, and gains of *r* in the subsequent year. As periodic performance measure, this cash based performance measure is not reflective of the economic earnings on the savings account of (1+r/r) times the expense. In order to improve performance measurement for contracting purposes, the deposit is amortized and matched to the revenue pattern to create accounting earnings (i.e., in this case, permanent and highly

persistence earnings).[3] For financial reporting purposes, expenses would have to be capitalized as an operating or financial asset depending on the business model. Revenues would meet the definition of free cash flows and earnings.

In general , expenses can be matched to revenues for every time interval, not just over one fiscal year. Assume expenses for the savings account are matched intra-year on a daily basis, yielding a daily earnings number. For accounting purposes, intra-year daily earnings are aggregated over the fiscal period (e.g. per quarter of per year). In the case of annual earnings, the sum of 365 daily intra-year earnings in one fiscal-year would be reported annual earnings. In this setting of perfectly matched intra-year expenses and revenues, the timing of the opening of the savings account can be inferred From reported earnings in the first year.[4] If the account is opened on the first year of the fiscal year, earnings would be 365 times the daily earnings return. If the account is opened *n* days later, the reported earnings would be (365-*n*) times the daily earnings, or (1-*n*/365) times annual earnings, where (n/365) represents a time-weighting of the intra-year daily earnings in time-weighted annuals earnings. This calculation would only work if intra-year expenses and revenues are perfectly matched on a daily basis. Inter alia, if it is known that annual earnings are more than (1-*n*/365) times daily earnings for savings account opened on day *n* of the fiscal year, one can infer that expenses and revenues must not have been matched perfectly on a daily basis. In general, we propose that comparing a cross-section of savings accounts given *r* with varying initial openings dates *n*, the extent that reported annual earnings are

[3] Graham, Harvey and Rajgopal (2005, 13) survey CFO on the importance of different performance measures such as earnings, revenues, cash flow from operations, free cash flows and pro-forma earnings, and state that "CFOs state that earnings are the most important financial metric to external constituents". Ball, Gerakos, Linnainmaa and Nikolaev (2016) suggest however, that the cash-based performance measure better explains the cross-section of expected returns than the accruals based measure.

[4] Dichev and Tang (2008, 1427) refer to this type of matching as indirect matching.

not equal to expected matched earnings (1-*n*/365) based on the initial openings date *n* relative to a full year of365 daily earnings is a proxy for the level of actual matching in a savings account. This is our measure of matching.

In the example above, there has been no change in the expected return on the savings account. This example can be extended to a setting where the interest rate *r* is subject to change during the year after the initial deposit. If *r* is increased (reduced) permanently after initial opening of the savings account, given the deposit, revenues will be higher (lower), and therefore earnings will also be higher (lower). Under perfect matching, expenses would be matched to the new revenues to reflect higher (lower) permanent earnings. However, under conservative accounting, the matching is different for "good news" (reflecting a higher *r*) compared to "bad news" (reflecting a lower *r*). Bad news is completely unmatched from future revenues over the life of the account on the day the change is announced, whereas the good news will still be perfectly matched over the life of the account. In this case, given a shock to *r* on day *n* with similar magnitude, the sum of (365-*n*) remaining daily earnings for the remaining part of the fiscal year relative to the pre-shock sum of *n* daily earnings will be lower for bad news shock compared to the sum of (365-*n*) remaining daily earnings for the remaining part of the fiscal year relative to pre-shock *n* daily earnings in case of a good news shock. Furthermore, the effect of bad news will be more pronounced the later the news is announced in the fiscal year (or as n approaches 365). For instance, on the last day of the year (n=365), all the bad news over the life of the savings account would still be recognized in the end-of-year sum of daily earnings for the year, whereas only one-day of good news would be added to the end-of-year sum of daily earnings. This reflects the practice of conditional conservatism, which is employed to increase the efficiency of accounting for contracting purposes (Ball and Shivakumar 2005).

We propose that the end-of-year daily earnings coefficient is a proxy for the news that is not matched in the current year, but rather is based entirely on expectations of future revenues or earnings. We call this end-of-year recognition.

The intra-year matching effect would be more pronounced, the longer the life of the savings account. This is consistent with prior research that shows that the effect of matching is more pronounced for firms with longer operating cycles, creating larger timing problems for cash flows (Dechow 1994; Dechow et al. 1998; Frankel and Sun 2018), and prior research that shows that differences in economic income and accounting income dissipate over longer measurement intervals (Easton et al. 1992; Kothari and Sloan 1992; Ryan and Zarowin 2003). Furthermore, this effect is expected to be more pronounced in revenues for good news, and more pronounced in expenses for bad news, consistent with Banker, Basu and Byzalov (2017), who show the role of impairments in conditional conservatism, using both revenues and returns as impairment indicators. Finally, the effect on the asymmetry in loss recognition is consistent with Ball et al. (2013b), who show that this asymmetry is associated with the operating cycle.

Ball and Easton (2013) empirically use this intra-year matching effect in the annual earnings-return regression, where annual returns reflect the news on changes in expectation of revenues and associated expenses. In the standard earnings-return regression, annual returns are the sum of all daily returns, where the daily ERT is implicitly the same every day (e.g. certain daily earnings), and therefore annual return is equal to the sum of 365 average daily returns.[5] As such, the aggregation of daily ERTs into an annual ERT, requires only the annual return data, without the requirement of daily returns data. However, as explained

[5] In other words, there is a tautology. The annual return is the sum of 365 daily returns (annual return = $\sum_{n=1}^{365} \text{daily return}$). Without any information on actual daily returns, regression using only annual return data implicitly assume the daily return is annual return/365, which is equal to the average daily return, or alternatively, the annual return is 365*average daily return.

above, as new comes out during the year on a daily basis, daily returns may deviate from average, or constant, daily returns. Given the end-of-year timing effect explained above, depending on the sign of the news, later news is more likely to affect expenses rather than revenues. Ball and Easton (2013) show that this is the case, and show by dissecting returns into the full annual return and a correction for time-weighted returns, the matching part and the end-of-year timeliness part of ERT can be estimated separately. More specifically, they estimate the following regression:

$$EARN_{jt} = \propto_{0t} + \beta_{1t}^{ANN} * RET_{jt}^{ANN} + (\beta_{2t}^{TIME-WEIGHTED} - \beta_{1t}^{ANN}) * RET_{jt}^{TIME-WEIGHTED} + \varepsilon_{it} \quad (1)$$

The first coefficient β_1 in regression (1) is the ERT. It is the reciprocal of the capitalization rate of the deposit to into the entity value, or r/(1+r) under certainty and permanent earnings. Note that a high capitalization rate leads to a low ERT, similar to how a high capitalization rate leads to a high earnings response coefficients (ERC) (Collins and Kothari 1989; Easton and Zmijewski 1989; Kormendi and Lipe 1987). That is, the more persistent earnings are, the lower the ERT. This is consistent with Dutta and Patatoukas (2017), who argue that higher expected return *r* and higher persistence of cash flows increase asymmetric ERT, regardless of contracting incentives.

The second term, the coefficient (β_2-β_1), reflects the (intra-year) linear-restriction in coefficients, that is significant if intra-year matching significantly affects the recognition of news in earnings, or β_1. This restriction assumes a negative, linear time-trend in the daily ERT intra-year, and is conceptually identical to the time-weighting of daily returns in the savings account above. The linear restriction is significant if more good news is booked in revenues relative to bad news in expenses to generate annual earnings, or more bad news is booked in expenses relative to good news in revenues. Therefore, the time-weighted return can be seen as a correction to the recognition of the full sum of daily earnings, only if there is

matching of news over multiple fiscal periods. Hence, absent matching, (β_2-β_1) is zero and not significant. Figure 1 shows the intra-year trend in the ERT graphically. Figure 1a shows coefficients of regressions of sales on daily returns for each day of the fiscal year, where each observation is the sales recognition timeliness coefficient (SRT) for a specific day in the fiscal year for pooled data from years 1970-2017. The time trend reflects the intra-year trend, and the fitted line is estimated from a regression of the daily sales-return coefficient of day of the year. Figure 1a show a significant downward trend (t-stat -6.00, based on Newey-West standard errors to correct for autocorrelation) in the daily SRT over the course of the fiscal year, suggesting that less news about future sales in daily returns is recognized in contemporaneous fiscal year sales toward the end of the year compared to the beginning of the year, consistent with the savings account example given before. This is due to revenue recognition principles that require the matching of sales to the period it is earned. Figure 1b shows the intra-year trend for the daily expense recognition timeliness coefficient XRT. Figure 1b show a significant upward trend (t-stat 5.20) in the daily XRT over the course of the fiscal year, suggesting that more news about future expenses in daily returns is recognized in contemporaneous fiscal year expenses toward the end of the year compared to the beginning of the year, consistent with the conservatism principle. Figure 1c shows the trend of the daily ERT, which is the sum of the daily SRT and the daily XRT, where expenses are negative. Figure 1c shows a significant downward trend (t-stat -5.04) in the daily ERT over the course of the fiscal year, suggesting that more news about future expenses in daily returns XRT recognized in contemporaneous fiscal year expenses toward the end of the year dominates the positive trend in SRT, consistent with the conservatism principle increasing the ERT.

Ball and Easton (2013) show that this dissection of end-of-year timeliness and matching can be measured in an alternative specification of model (1), by replacing earnings for firm *j* in year *t* with sales revenue and expenses for firm *j* in year *t* as independent variables. Given the mechanics of OLS regressions, the coefficients β_1 and $(\beta_2-\beta_1)$ display additive properties when calculating earnings as the difference between revenues and sales, such that the coefficient on returns in the earnings-return regression (i.e. earnings recognition timeliness) equals the coefficient on returns in the sales-return regression (i.e. sales recognition timeliness) minus the coefficient on returns in the expense-return regression (i.e. expense recognition timeliness), since earnings equals sales revenues minus expenses. [6]

As such, the second term is a proxy for the extent transitory timing issues require matching in earnings through the matching of expenses to sales. More specifically, this proxy for matching (MATCHRECOG) is measured as the extent that intra-year ERTs deviate from the average ERT, or as $0.5* [\beta_1 -(\beta_2- \beta_1)]$, where superscript and firm and year subscripts are omitted for brevity. Notice that, when there is no matching of news about expense to sales over multiple years, the coefficient on matching is equal to β_1 ,or the average daily ERT. It follows that end-of-year recognition (ENDRECOG) is equal to $[\beta_1 +(\beta_2- \beta_1)]$ and total recognition (TOTALRECOG) is $0.5*[\beta_1 + (\beta_2- \beta_1)]$. End-of-year recognition represents news on future cash flows that are unlikely to affect current year earnings, given that represents news that is delivered towards the end of the fiscal year, whereas matching represent the average news recognition over the full length of fiscal period. Conceptually, this approach based on properties of intra-year returns is similar to the approach of Givoly, Hayn and Natarajan (2007), who examine the effect of the clustering of the type of news intra-year to

[6] We extend this analysis for components of expenses, using the expense components from the income statement articulation model of Casey et al. (2016).

measure the effect of the aggregation of good news versus bad news in returns on timely loss recognition. Ball and Easton (2013) extend this approach to revenues and expenses, and create a returns-based proxy for matching, based on the likelihood that matching affects the timely recognition of losses.

2.2 Unconditional conservatism

In the example of the savings account, revenues from a deposit are subject to conditional conservatism and matching. This setting can be extended to an uncertainty setting that requires unconditional conservatism, or a deliberate understatement of the deposit. If under uncertainty, unconditional conservatism leads to an understatement of the deposit, the expected revenues, and therefore earnings as rate of return-on-assets will appear to be overstated. This will have two effects on the properties of earnings. First, given the lower capitalization of the deposit, matching will be less perfect. Second, conditional conservatism is pre-empted, reducing the contracting relevance of earnings, because when news is good, losses are overstated, and when news is bad, losses are understated.

In this setting, transactions with the owner of the savings accounting can be informative, as transaction with owners are typically discretionary (Dechow et al. 2009). With respect to uncertainty regarding the rate of return on assets, Dechow et al 2009 show that free cash flow is the best indicator of the persistence of (future) earnings. Hence, a new deposit (withdrawal) into (from) the savings account is a complementary indicator of expectation of future expectations about (changes in) *r* (i.e. news, measured by returns). A contribution to the savings accounts as a new deposit (i.e. negative free cash flow) signals information regarding uncertainty the owner faces about persistently lower *r* in the future, as not enough cash was generated to fund operations, while a withdrawal from the savings

account (i.e. positive free cash flow) signals confidence that current profitability is likely to persist, allowing the consumption of current returns on assets *r*, when more cash was generated than necessary to fund operations. The level of the new deposit is also informative, because a large deposit relative to the current deposit will have a bigger effect on revenues than a small new deposit.

Easton et al. (2019) show that earnings recognition timeliness can be augmented by adding free cash flow as an incremental explanatory variable to the earnings- return regression, to capture the effect of unconditional conservatism. This is consistent with the idea of " accounting value added", where cash is informative of investment in operating assets subject to over depreciation. In this case, value is created not by economic income on new NPV projects, but by residual income on assets subject to unrecorded goodwill (Easton 2000). Dechow et al. (2009) that cash distributions to equity holders has the highest explanatory power for predicting accounting value added. More specifically, Easton et al. (2019) run the following regression:

$$EARN_{jt} = \propto_{0t} + \beta_{1t} * RET_{jt}^{ANN} + \beta_{2t} * FCF_{jt} + \varepsilon_{it} \quad (2)$$

Easton et al. (2019) find that the coefficient β_2 on free cash flows in regression (2) explains variation in earnings at least as much as coefficient β_1 on returns, and furthermore, that this depends on both the sign of free cash flows as well as the sign of returns. We extend their regression-model by incorporating information on free cash flows into regression (1), that incorporates conditional conservatism and matching in the earnings-return relation. Note that our analysis of the role of unconditional conservatism differs from Roychowdhury and Watts (2007), who examine historic unconditional conservatism in relation to current conditional conservatism, whereas we examine the association between contemporaneous unconditional conservatism and conditional conservatism.

The addition of free cash flow to the earnings-return regression is important for the following reasons. First, the nature of economic income has changed over time. Investment rates in intangible assets have increased dramatically, while investment rates in tangible assets have dropped over time, increasing intangible intensity of firms (Srivastava 2014; Lev 2018). Beaver and Ryan (2005) argue that returns become a noisier proxy for the returns to tangible assets the higher the proportion of intangibles, potentially smoothing asymmetric timeliness. Second, returns on intangibles are more volatile (Srivastava 2014). As intangibles become more important for the economy, this potentially biases asymmetric timeliness through an economic non-accounting channel, such as aggregation of news, cash flow persistence, expected returns or return volatility (Givoly et al. 2007; Patatoukas and Thomas 2011; Patatoukas and Thomas 2016; Dutta and Patatoukas 2017). Third, investment in intangibles are related to the percentage of accounting losses in an economy, potentially biasing asymmetric timeliness through an accounting channel (Joos and Plesko 2005; Klein and Marquardt 2006; Patatoukas and Thomas 2011). Free cash flows are informative for income recognition by comprehensively capturing the effect of unconditional conservatism on the accounting for intangibles (e.g. expensing R&D). Furthermore, as explained in the example above, unconditional conservatism affects conditional conservatism and matching, thus interacting free cash flow with these measure comprehensively captures this effect as well.

2.3 Predictions

In this section, we describe our predictions for changes in earnings recognition over time for each of the three component described above.

Timely loss recognition. We focus on timely loss recognition (TLR) in our examination, given the importance in the literature. However, we also report on timely gain recognition (TGR). TLR is measured as total recognition (TOTALRECOG) for bad news (BN), as the sum of end-of-year timeliness and intra-year matching for firms with negative returns. We expect TLR to increase over time, consistent with the results of Givoly and Hayn (2000) and Ball and Shivakumar (2006). Prior research argues that the increase in TLR reflects an increase in the contracting role of accounting (Kothari et al. 2010; Christensen et al. 2016). Our model incorporates the information from the sign of free cash flows and return, which allows us to disentangle the change in TOTALRECOG due to the decrease in expectation of persistence of future earnings, as reflected by transaction with shareholders, from the increase of economic losses, as reflected by news in returns.

Matching. We expect matching to have decreased based on the results of Dichev and Tang (2008) and Srivastava (2014), who show an decrease in matching, as unconditional conservatism and higher volatility of news regarding revenues from intangibles in recent years affects the matching of revenues and expense. Our model incorporates the information from the sign of free cash flows and return, which allows us to disentangle the change in matching due to volatility of income statement items from change in matching due to unconditional conservatism.

Free cash flow. We restrict our examination to free cash flow distribution to and from equity holders, as Dechow et al. (2019) show that transactions with equity holders drive their results. We expect the role of free cash flow in earnings recognition to increase, as the increase of intangible intensity increases the noise in returns. Our model incorporates the information from the sign of free cash flows and return allows disentangling the change in

earnings recognition due to the increase of the contracting role of conditional conservatism from the deliberate understatement of assets due to unconditional conservatism.

3. Data and Sample Selection

Financial statement data are obtained from the Compustat annual database and stock return data are obtained from the daily CRSP files. To construct our sample, we start with all firm-year observations in Compustat and CRSP for the years 1970-2017. We delete all firm-year observations with insufficient data to compute the primary financial statement variables and observations with insufficient data on the CRSP daily returns files to calculate annual returns from daily returns for each of the trading days in a specific year. We exclude utilities (SIC code from 4900 through 4999) and financials (SIC code from 6000 through 6999), and observations with a share price less than $1 at the beginning of the year. To avoid the influence of extreme observations, we delete for every year the top and bottom one percent of share price (Compustat item *PRCC_F*), earnings before extraordinary items (Compustat item *IB*), sale revenue (Compustat item *SALE*) and expenses, annual returns and distributions to equity holders. We measure expenses as the difference between sales and earnings before extraordinary items. Annual returns are measured as the sum of the daily returns for all trading days in the year, where daily returns are calculated as the daily price change plus the daily dividend payment scaled by the beginning-of-year price. Distributions to equity holders are calculated as the change in equity in the fiscal year minus earnings before extraordinary items. Finally, we decompose earnings following the Compustat income statement articulation model of Casey, Gao, Kirschenheiter, Li and Pandit (2016). To preserve the additivity of the Casey et al. (2016) decomposition of earnings, we deduct each income statement component from revenues after deletion of outliers, such that the sum of

all components sum to earnings before extraordinary items after deletion of outliers. We scale all financial statement variables using beginning-of-year market value of equity. Appendix A describes the variables in detail.

Our sample includes 71,260 firm-year observations over the 48-year period from 1970 to 2014. Table 1 reports descriptive statistics. The distributions of the main variables are similar to those reported in Ball and Easton (2013). The average value of earnings is 0.030, while the average value of distributions to equity holders is close to zero at -0.007. Sales are on average 2.540, and expenses are defined as the difference between earnings and sales at -2.510, where expense are multiplied by -1. The components of expenses taken from Casey et al. (2016) suggest that annual expenses consist mostly of Cost of Goods Sold (COGS) at -1.835 and Selling, General and Administrative expenses at -0.504. Special items receive a lot of attention in the conservatism literature, but comprise only a small component of total expenses on average at 0.016. The average return is 12.9 percent per year, and the average value of the indicator variable for negative returns shows that 56.3 percent of the firm-year observations display bad news. Finally, the indicator variable for free cash inflows shows that 44.5 percent of the firm-year observations have shareholders contributing cash to the firm.

4. Empirical Results

The basic earnings-returns model

Table 2 starts with an examination of the basic ERT model, without partitioning of news into good news and bad news, and free cash flows into inflows and outflows. We run the following regression, to establish the base-line ERT, and the effect of free cash flows on earnings recognition (where firm and time subscripts are omitted for brevity):

$$EARN = \propto_0 + \beta_1^{ANN} * RET^{ANN} + (\beta_2^{TIME-WEIGHTED} - \beta_1^{ANN}) * RET^{TIME-WEIGHTED}$$
$$+ \beta_3 * FCF + controls + \varepsilon \quad (3)$$

This regression combines the two models of Ball and Easton (2013) and Easton et al. (2019). We include controls following the suggestions of Ball et al. (2013b). Furthermore, we demean all independent variables by industry-year mean, in order to include fixed effects by industry and year (see Ball et al. 2013a). This allows us to compare the R^2 between models. However, the interpretation of the intercept is not meaningful in this setting. Reported t-statistics are based on standard errors clustered by year and industry (Gow, Ormazabel and Taylor 2010).

In Panel A, Model (1) establishes the baseline ERT, as measured by β_1 on annual returns. In model (1a) we exclude controls, consistent with most of the models used in the prior literature on conditional conservatism, to establish the baseline ERT. The ERT in this model is 0.092 (t-stat 8.10), indicating that *ceteris paribus*, relative to the industry-year mean, 9.2% of economic news is recognized in earnings in the fiscal year. This result indicates that accounting earnings is not a timely measure of economic news, as most of the economic news is deferred in earnings in future periods. This model explains 7.5% of the variation in economic news. In model (1b), we include control variables. The results of model (1b) indicates that including controls increases the R^2 to 22%, however, it does not change the ERT compared to model (1a). We include controls in all subsequent models. In model (2a), the time-weighted return is added to model (1b). The coefficient (β_2-β_1) represents a linear restriction of β_1. This restriction is significant, suggesting that intra-year daily ERTs decline significantly over the fiscal period. The combination with β_1 and β_2 allows us to estimate the effect of end-of-year timeliness, matching, as well as the combined effect, which measures timely recognition of news in earnings (i.e. ERT). Coefficient of these linear

combinations are represented in model (2b). TOTALRECOG is the ERT over the fiscal period, and is 0.092 (t-stat 9.83). This is composed of the recognition of news in earnings at the end-of-year (ENDRECOG) of 0.072 (t-stat 5.14) and matching (MATCHRECOG) of 0.020 (t-stat 2.77). The explanatory power of the model increase only marginally by adding this restriction. In model (3), we examine the incremental effect of adding free cash flow to shareholders (DIST_EQ) to model (1b). The coefficient on free cash flow is almost double the ERT, at 0.184 (t-stat 8.90). This coefficient represents both cash contribution from the firm to shareholders (OUT) and cash contributions from the shareholder to the firm (IN). Adding free cash flows increase the explanatory power of the mode only marginally. Model (4a) adds free cash flows to model (2a). The results indicate that the coefficients on news recognition and free cash flows remain qualitatively unchanged from models (2a) and (3).

We expand our analysis to examine if our results are affected by scale issues in earnings-returns models in model (4b), where free cash flow possibility picks up scale. Earnings-returns models are potentially biased due to scale issues (Patatoukas and Thomas 2011). Furthermore, Ball and Easton (2013, fn 18, 1111) note that removing outliers has a considerable effect on their regression results. Easton Sommers (2003) suggest that deletion of outliers may not suffice to deal with scaling issues ((see also Ohlson and Kim 2015), while Durtschi and Easton (2005) note that scaling often represents a combination of factors, consistent with Patatoukas and Thomas' (2011) findings regarding scale in Basu's model for conditional conservatism. We test the robustness of this model to these issues before we continue with the remainder of the analysis. Model (4b) estimates model (4a) using median regression, with bootstrapped standard errors clustered by year and industry (Gow, Ormazabel and Taylor 2010).[7] While the coefficients are somewhat smaller than model (5),

[7] We use *qreg2boot*, available from Dan Taylor's website (http://acct.wharton.upenn.edu/~dtayl/code.htm

the tenure of our results remain unchanged, consistent with Kim and Ohlson (2018). We therefore use OLS regressions for the remainder of the model, consistent with prior literature.

Panel B show results from test of time trends in the coefficients of model (4a). More specifically, for each coefficient, we estimate the following regression:

$$Coeff = \propto_0 + \beta_1 * Time + \varepsilon \qquad (4)$$

In this regression, the coefficient on *Time* represents the time trend from 48 annual regressions, as represented in Panel C of Table 2. The adjusted R^2 appears to be stable around 30%-40%. The coefficients on annual returns (TOTALRECOG) and time-weighted returns (MATCHRECOG) do not appear to display any apparent trend, however, peaks in recognition appear in years of crisis, including the oil crisis of 1974, the internet-bubble of 2002, and the financial crisis of 2008, suggesting that there is a significant role for conditional conservatism. Panel B of Table 2 report coefficient on *Time*, with t-statistics reported adjusted for Newey-West autocorrelations of three lags. Results show no significant time trends for the coefficients on TOTALRECOG, ENDRECOG or MATCHRECOG, indicating that there has not been a significant change in the recognition of news in earnings over the period 1970-2017. However, the coefficient on the trend in DIST_EQ is highly significant with a t-stat of 5.68, indicating a strong increase in the explanatory power of DIST_EQ over time. This result is consistent an increase in the importance of unconditional conservatism, for instance due to the prominence of intangibles in recent years. Figure 2 illustrates the change in the importance of unconditional conservatism over time, plotting the coefficients of Panel C of Table 3. The increase in the recognition of unconditional conservatism, as proxied by free cash flows, is unmistaken.

[last accessed 30 May 2019]). Bootstrapped standard errors are estimated using 1000 iterations.

There are a multiple of mechanisms that potentially drive this result, including interactions between these mechanisms. This may affect measuring conditional conservatism. For instance, intangibles reduce the role of returns in measuring conditional conservatism for tangible assets, reducing the ability of the ERT to measure economic income (Beaver and Ryan, 2005). Furthermore, intangibles are subject to higher uncertainty regarding future benefits, increasing return volatility and cash flow volatility, affecting the ERT as well (Ball et al. 2013b; Dutta and Patatoukas 2017). Finally, due to unconditional conservatism, investments in intangibles are not recognized in operating assets, pre-empting conditional conservatism (Easton et al. 2019). In the next section , we partition model (3) into good news and bad news, and free cash outflows to shareholders and free cash inflows from shareholders.

The expanded earnings-returns model

In Table 3, we first partition regression (3) based on positive and negative returns, excluding DIST_EQ from the regression. Next, we partition regression (3) based on cash outflows to shareholders and cash inflows from shareholders, excluding DIST_EQ from the regression. Finally, we partition regression (3) on both the sign of returns and cash flows, excluding DIST_EQ from the regression.

Timely Loss Recognition: Panel A of Table 3 shows the results for model (1) for end-of-year timely loss recognition ENDRECOG, where we partition on good news (GN) and bad news (BN). Our results are in line with the results from Basu (1997), that accounting recognize bad news in a more timely manner than good news. Furthermore, in the adjacent column, we show the coefficient on Time for each variable. There is no significant time trend, suggesting that end-of-year timely loss recognition has not changed over time.

We also show that there is a difference in earnings recognition for firms that have cash outflows compared to firms that have cash inflows for model (2). Only firm that have cash outflows show a significant ERT, suggesting that the persistence effect of Dechow et al. (2009) is only reflected in cash outflows. However, in model (3), this is further explained by the difference in good news and bad news. When news is good and shareholders contribute to the firm for investment in positive NPV projects (i.e. projects that the market evaluate as good news), unconditional conservatism requires immediate expensing, resulting in negative results in the year. This result highlights the interaction effect of unconditional conservatism with conditional conservatism.

Matching: Panel B of Table 3 shows the results for end-of-year for matching of economic news MATCHRECOG, where we partition on good news (GN) and bad news (BN). Our results are in line with the results from Ball and Easton (2013), that news is matched over multiple period and that matching for bad news is significantly higher than matching for than good news. Furthermore, in the adjacent column, we show the coefficient on Time for MATCHRECOG_BN is significantly positive, consistent with Dichev and Tang (2008) and Srivastava (2014), that matching has lowered over time, as higher TLR is the flip side of lower matching.

Similar to end-of-year recognition, we also show that there is a difference in matching for firms that have cash outflows compared to firms that have cash inflows for model (2). Only firm that have cash outflows show a significant matching, suggesting that the persistence effect of Dechow et al. (2009) is only reflected in cash outflows. However, in model (3), this is further explained by the difference in good news and bad news. When news is good and shareholders contribute to the firm for investment in positive NPV projects (i.e. projects that the market evaluate as good news), unconditional conservatism requires

immediate expensing, resulting in lack of operating assets that are capitalized and matched. This result highlights the interaction effect of unconditional conservatism with matching.

Total Recognition: Panel C of Table 3 shows the results for total recognition, which is the sum of end-of-year for recognition and matching of economic news. Again, timely loss recognition is much higher than timely gain recognition, however, timely loss recognition is no longer significant due to the mitigating effect of matching on end-of-year timeliness. Finally, the coefficient on Time for TIMERECOG_GN is significantly negative, suggesting that good news recognition has lowered over time, rather than an increase of TLR as suggested in the prior literature. Results of the cash flow analysis in models (2) and (3) are consistent with end-of-year recognition and matching. Furthermore, after this partitioning, the time trend in good news is no longer significantly negative, and the time trend for TLR is significantly positive for cash inflows, consistent with higher TLR due to increased contracting over time.

The free cash flow-returns model

In Table 3, we excluded DIST_EQ from regression (3), in order to establish how cash outflows and inflows interact with the asymmetric earnings-return relation. In Table 4, we add DIST_EQ to the regression, to establish the explanatory power of cash flows. We exclude time-weighted returns, as we are not examining returns in detail in this analysis. We first partition regression (3) based on positive and negative returns, excluding RER_TW from the regression. Next, we partition regression (3) based on cash outflows to shareholders and cash inflows from shareholders, excluding RET_TW from the regression. Finally, we partition regression (3) on both the sign of returns and cash flows, excluding RET_TW from the regression.

Conditional Conservatism: The first column of Table 4 shows the results for model (1), where we partition returns on good news (GN) and bad news (BN). Our results are in line with the results from Basu (1997), that accounting recognize bad news in a more timely manner than good news. Furthermore, consistent with the results in table 2, DIST_EQ is highly significant, and show a significant positive time trend.

Unconditional Conservatism: The third column of Table 4 shows the results for model (2), where we partition free cash flow on the sign of free cash flow using D_DIST_EQ, which is an indicator variable that takes the value of one if shareholders contribute cash into the firms, and zero if shareholders take cash out of the firm. Our results suggest that the explanatory power of free cash flows for earnings is driven by cash contributions into the firm, as the coefficient on DIST_EQ, which represents the coefficient on cash flows out of the firm, is insignificant. The interaction term D_DIST_EQ*DIST_EQ is positive and significant. The direction of the coefficient on DIST_EQ is in opposite direction of the ERT with regards to future income persistence. A low high ERT means persistence, while a high coefficient on D_DIST_EQ*DIST_EQ suggest high investment from new cash contributed to the firm by shareholders into operations that generate persistent future income (Dechow et al. (2009). Th time trend on this coefficient is positive and significant, while the time trend of DIST_EQ is not significant. This results suggest that the time trend in free cash flows is driven by cash inflows. Furthermore, the interaction term D_DIST_EQ*RET is negative and significant, suggesting more persistent earnings.

The fifth column of Table 4 interacts the sign of return with the sign of cash flows. Results from this analysis suggest that free cash flow as proxy for unconditional conservatism are especially relevant for good news firms, as the coefficient on D_DIST_EQ*DIST_EQ remain positive and significant, with a significant positive time trend,

while D_DIST_EQ*DRET*DIST_EQ is not significant, and displays an significant negative time trend, suggesting good news recognition is driving the importance of unconditional conservatism. Furthermore, the asymmetric ERT is less pronounced in this specification, consistent with Beaver and Ryan (2005) and Dutta and Patatoukas (2017).

Articulation of income statement items into expenses

In tables 5 and 6 we use the model of income statement articulation of Casey et al (2016) to further dissection earnings recognition timeliness. More specifically, given that earnings equals revenues minus expenses, we assume revenue recognition is constant, and dissect expenses into operating and nonoperating components.

Table 5 Panel A examines the earnings-return analysis for components of expenses. No particular pattern between operating and nonoperating expense is apparent in this analysis. Of note is the role of taxes (TXT) in model 9, which shows significance for both matching and timely recognition, consistent with Watts (Watts 2003), who suggests that taxation is an important determinant of timeliness. In Panel B of Table 5, this element of expenses shows a clear time trend.

In contrast, in Table 6 Panel A, the analysis of the free cash flow-returns examination for elements of expenses show a clear association of operating expenses with unconditional conservatism. Furthermore, Table 6 Panel b shows clear time trends for special items (SPI). To the extent that this element exhibits unconditional conservatism for gains on sales of assets that were over-depreciated due to unconditional conservatism, this result is consistent with Johnson, Lopez and Sanchez (2011), who show that the frequency of reporting positive special items has only increased in recent years.

Free Cash Flow analysis – cash and non-cash components

Our analysis is predicated on the idea that unconditional conservatism reduces net operating assets relative to neutral accounting. As a result, free cash flow is informative of cash generated from investments when the investment is expensed. We test this assumption in three ways. First, we examine cash components of earnings in relation to the free cash flow model. As free cash flow is defined as changes in equity excluding earnings, we expect a relation with the cash component if the cash component of earnings is likely to persist due to transactions with equity holders. Models (1) –(3) of table 7 examine respectively cash net income, cash revenues and cash expenses reported in Compustat. The results are consistent with the results from table 6, indicating free cash flow is informative of persistent earnings from operations.

Second, Models (4)and (5) of table 7 examine respectively other comprehensive income and goodwill impairments reported in Compustat. These are non-cash accounting items reflected in income, that are not subject to unconditional conservatism. Results show that these items are not significant in the free cash flow analysis.

Third, Models (6)and (7) of table 7 examine respectively gains and losses from sales of assets and R&D expenses reported in Compustat. These are non-cash accounting items reflected in income, that are not subject to unconditional conservatism. Results show that these items are significant in the free cash flow analysis for operating expenses (XRD) and not for non-operating expenses (GLP). We note however to interpret these results with caution, as we only use observations reported in Compustat. As we cannot distinguish items not reported by firms from observations not reported in Compustat, the low level of observations may limit conclusions from this analysis.

Conclusion

In this paper, we examine changes in earnings recognition timeliness over time. Earnings recognition is subject to the conservatism principle and the matching principle. These are fundamental attributes of financial reporting, and most prior literature have examined them in isolation. However, financial reporting is not a monolith. These attributes interact, and this interaction is subject to change over time. At the same time, the economy is subject to change. As a result, the properties of economic news have changed over time. We show that economic news that is subject to unconditional conservatism has changed dramatically over time. As a result, operating assets are less likely to reflect economic news, and therefore accruals based earnings potentially has a lower association with economic news, as reflected in the earnings timeliness recognition coefficient, or ERT. Our results however indicate that this is not the case. The ERT has remained quite stable over the last 48 years. However, as economic news changes over time, to understand earnings, an additional information variable is necessary to understand variation in earnings. Based on prior research, we show that free cash flows is very suitable to be that incremental information variable to returns. Our result imply that future research on earnings timeliness should include free cash flows.

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Appendix A: Variable Definitions

The sample consists of all nonfinancial firms for the years 1970-2017 with available data in the Compustat Fundamental Annual File. We follow Ball and Easton (2013), and select all firms with non-missing data on current net income before extraordinary items and sales revenue in the current and the previous year , as well as book value of common equity, book value of debt, price per share and number of shares outstanding at the end of the previous year.

IB	Income Before Extraordinary Items (compustat item IB) scaled by market value at the end of the previous fiscal year.
SALE	Net Sales (compustat item SALE) scaled by market value at the end of the previous fiscal year.
EXP	Net Sales (compustat item SALE) scaled by market value at the end of the previous fiscal year minus Income Before Extraordinary Items (compustat item IB) scaled by market value at the end of the previous fiscal year.
COGS	Cost of Goods Sold (compustat item COGS) scaled by market value at the end of the previous fiscal year.
XSGA	Selling, General and Administrative Expense (compustat item XSGA) scaled by market value at the end of the previous fiscal year.
DP	Depreciation and Amortization (compustat item DP) scaled by market value at the end of the previous fiscal year.
XINT	Interest and Related Expense (compustat item XINT) scaled by market value at the end of the previous fiscal year.
NOPI	Nonoperating Income (Expense) (compustat item NOPI) scaled by market value at the end of the previous fiscal year.
SPI	Special Items (compustat item SPI) scaled by market value at the end of the previous fiscal year.
TXT	Total Income Taxes (compustat item TXT) scaled by market value at the end of the previous fiscal year.
MII	Noncontrolling Interest (compustat item MII) scaled by market value at the end of the previous fiscal year.
RET	RET is the sum of daily change in price including dividends (CRSP items PRC+DIVAMT/CFACPR) over the fiscal period scaled by share price at the end of the previous fiscal year (CRSP items PRC/CFACPR).
RET_TW	RET_TW is the time-weighted sum of daily change in price including dividends (CRSP items PRC+DIVAMT/CFACPR) over the fiscal period scaled by share price at the end of the previous fiscal year (CRSP items PRC/CFACPR).Time-weights are the order of the trading days in the fiscal year.
DRET	DRET is an indicator variable that equals 1 if RET<0, and zero otherwise
DIST_EQ	annual distribution to shareholders, calculated as change in equity minus income. Equity is calculated as total assets (compustat item AT) minus total liabilities (compustat item DLC + DLTT).
D_DIST_EQ	D_DIST_EQ is an indicator variable that equals 1 if DIST_EQ<0, and zero otherwise
$PRIC_{t-1}$	price (CRSP item PRC) at the end of the previous fiscal year
MV_{t-1}	market value (compustat items MV*PRCC_F) at the end of the previous fiscal year
BM_{t-1}	book value of equity (compustat item CEQ) at the end of the previous fiscal year divided by market value (compustat items MV*PRCC_F) at the end of the previous fiscal year
DE_{t-1}	total liabilities (compustat items DLC + DLTT) at the end of the previous fiscal year divided by market value (compustat items MV*PRCC_F) at the end of the previous fiscal year

ENDRECOG	ENDRECOG is the linear combination of regression coefficients of a regression of income before extraordinary items on returns (b1) and timeweighted returns (b2- b1), determined as [b1 +(b2- b1)].
MATCHRECOG	MATCHRECOG is the linear combination of regression coefficients of a regression of income before extraordinary items on returns (b1) and timeweighted returns (b2- b1), determined as 0.5* [b1 -(b2- b1)].
TOTALRECOG	TOTALRECOG is the linear combination of regression coefficients of a regression of income before extraordinary items on returns (b1) and timeweighted returns (b2- b1), determined as 0.5* [b1 +(b2- b1)].
CIB	Cash component of income before extraordinary items, calculated as cash revenues - cash expenses
CREV	Cash revenues, calculated as revenues (Compustat item SALE) minus revenues accruals
Revenue accruals	change in accounts receivables (Compustat item RECT) minus change in deferred revenues (compustat itmes DRC + DRLT)
CEXP	cash expenses, calculated as total expenses- expense accruals
Expense accruals	Accruals - revenue accruals
Accruals	[change in current assets (compustat item ACT) - change in cash (Compustat item CHE)] minus [change in current liabilities (Compustat item LCT) - change in tax payable (Compustat item TXP)] minus depreciation and amortization (Compustat item DP) scaled by total assets (compustat AT)
OCI	Other comprehensive income, calculated as compustat items CIBEGNI plus CICURR plus CIDERGL plus CISECGL plus CIOTHER plus CIPEN minus CIMII, as defined by Casey et al. (2016)
GDWLIP	Goodwill (compustat item GDWLIP) scaled by market value at the end of the previous fiscal year.
GLP	Gain/Loss Pretax (compustat item GLP) scaled by market value at the end of the previous fiscal year.
XRD	Research and Development Expense (compustat item XRD) scaled by market value at the end of the previous fiscal year.

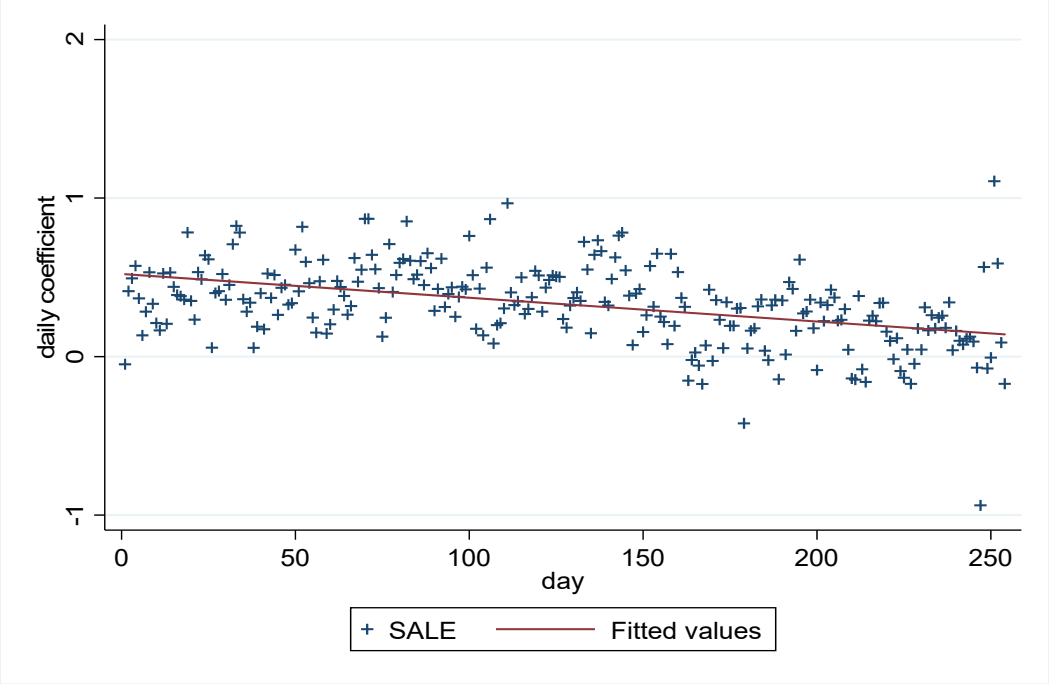

Figure 1a Intra-year time trend Sale Recognition Timeliness (SRT)

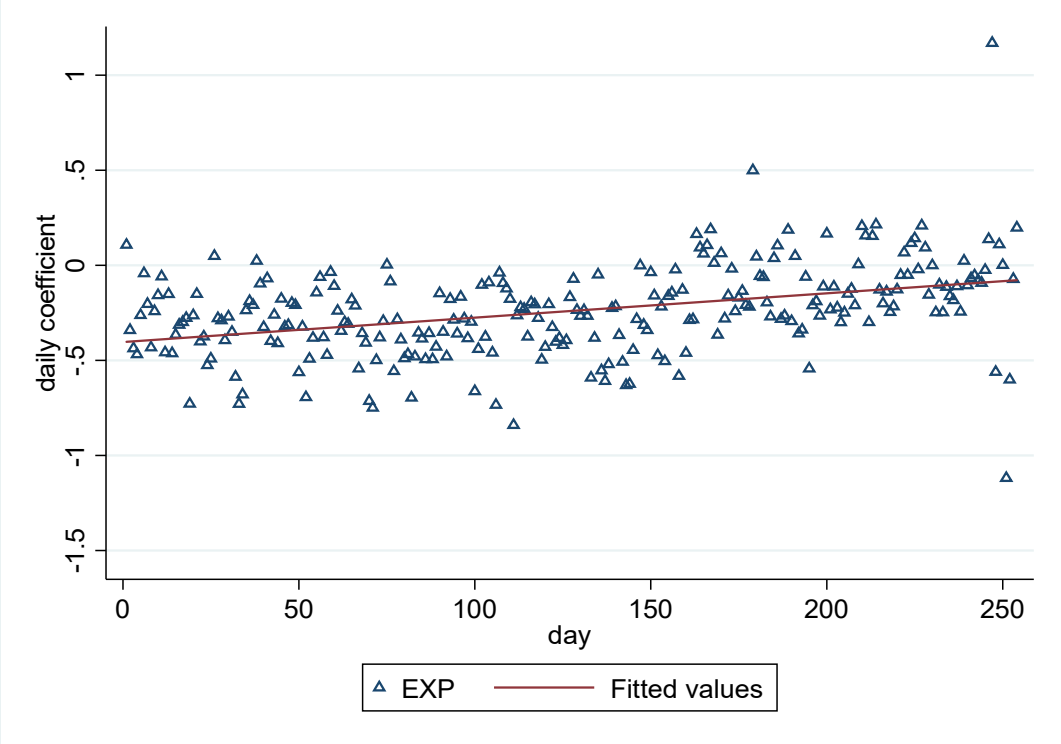

Figure 1b Intra-year time trend Expense Recognition Timeliness (XRT)

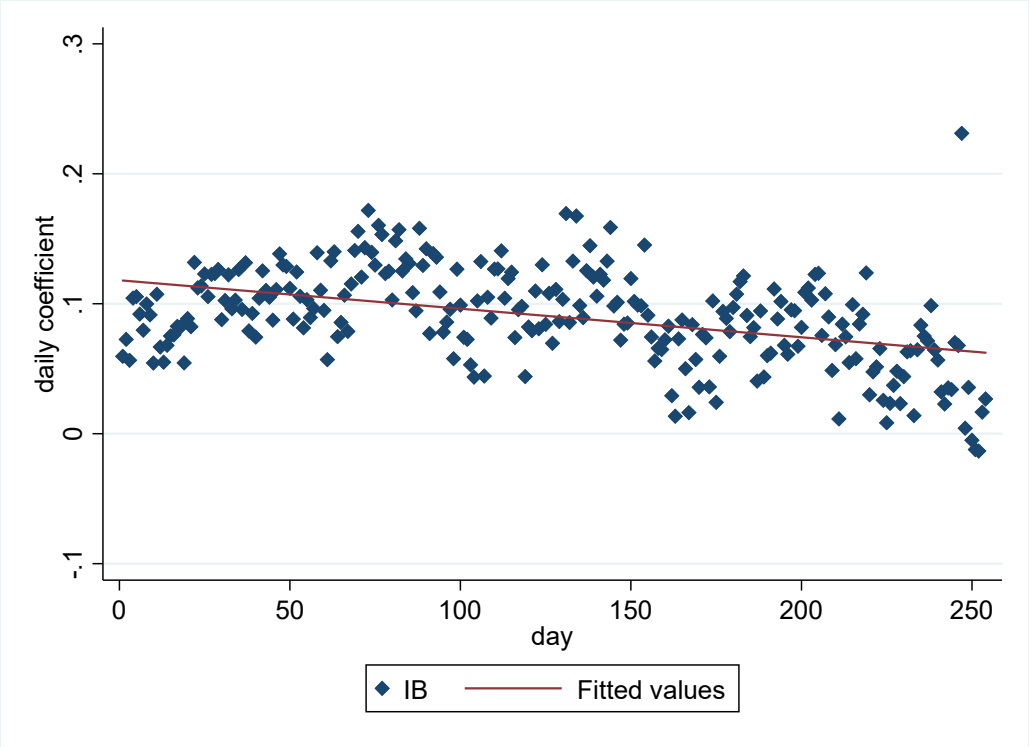

Figure 1 Intra-year time trend Earnings Recognition Timeliness (ERT)

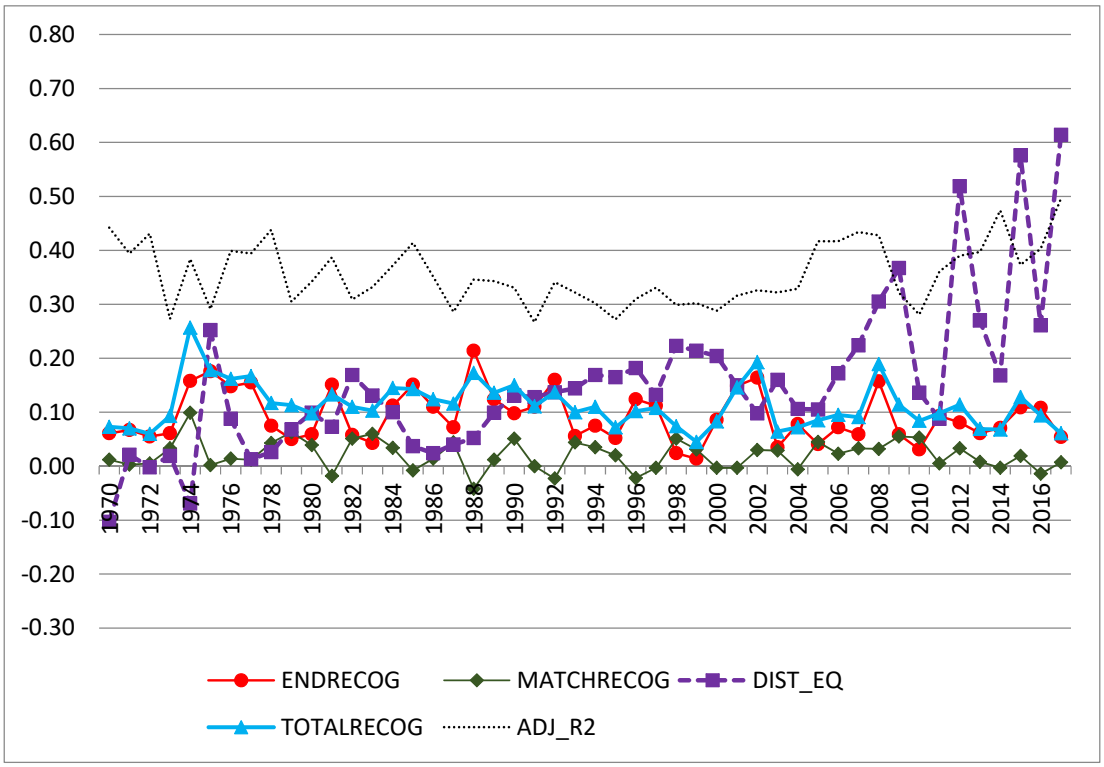

Figure 2 Earnings Recognition Timeliness over time

Table 1
Descriptive Statistics

variable	N	mean	sd	p25	p50	p75
IB	71,620	0.030	0.163	0.005	0.055	0.098
SALE	71,620	2.540	3.178	0.681	1.490	3.136
EXP	71,620	-2.510	3.156	-3.093	-1.458	-0.665
COGS	71,620	-1.835	2.578	-2.256	-0.966	-0.358
XSGA	71,620	-0.504	0.646	-0.606	-0.305	-0.149
DP	71,620	-0.082	0.110	-0.100	-0.051	-0.025
XINT	71,620	-0.048	0.095	-0.054	-0.018	-0.004
NOPI	71,620	-0.016	0.048	-0.018	-0.005	-0.001
SPI	71,620	0.016	0.081	0.000	0.000	0.006
TXT	71,620	-0.040	0.076	-0.060	-0.028	-0.003
MII	71,620	-0.001	0.011	0.000	0.000	0.000
RET	71,620	0.129	0.533	-0.203	0.061	0.354
RET_TW	71,620	0.050	0.322	-0.134	0.012	0.174
DRET	71,620	0.563	0.496	0.000	1.000	1.000
DIST_EQ	71,620	-0.007	0.124	-0.019	0.005	0.039
D_DIST_EQ	71,620	0.445	0.497	0.000	0.000	1.000
$PRIC_{t-1}$	71,620	19.3	19.1	6.2	13.6	26.1
MV_{t-1}	71,620	2,068.8	13,305.6	31.1	132.5	651.6
BM_{t-1}	71,620	0.742	0.654	0.339	0.585	0.969
DE_{t-1}	71,620	0.513	0.941	0.043	0.220	0.599

Definitions of variables are provided in Appendix A.

Table 2
The basic earnings-return regression

Panel A:
Model 1: IB= $b_0 + b_1$RET + controls + e
Model 2: IB= $b_0 + b_1$RET + (b2-b1)RET_TW + controls + e
Model 3: IB= $b_0 + b_1$DIST_EQ + controls + e
Model 4: IB= $b_0 + b_1$RET + (b_2-b_1)RET_TW + b_3DIST_EQ + controls + e

	(1a)	(1b)	(2a)	(2b)	(3)	(4a)	(4b)
VARIABLES	IB	IB	IB	IB	IB	IB	IB
RET	0.092	0.091	0.111		0.097	0.124	0.087
	(8.10)	(9.15)	(12.51)		(10.38)	(15.65)	(23.85)
RET_TW			-0.039			-0.052	-0.041
			(-2.76)			(-3.96)	(7.16)
DIST_EQ					0.184	0.190	0.086
					(8.90)	(9.13)	(7.89)
ENDRECOG				0.072		0.073	0.046
				(5.14)		(5.58)	(8.79)
MATCHRECOG				0.020		0.026	0.021
				(2.77)		(3.96)	(7.16)
TOTALRECOG				0.092		0.099	0.067
				(9.83)		(11.5)	(19.26)
Observations	71,620	71,620	71,620	71,620	71,620	71,620	71,620
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.075	0.222	0.223	0.223	0.238	0.241	0.241

Panel B: Coeff= $b_0 + b_1$Time + e

	RET	RET_TW	DIST_EQ	ENDRECOG	MATCHRECOG	TOTALRECOG	ADJ R^2
Constant	0.160	-0.052	-0.026	0.108	0.026	0.134	0.343
	(6.98)	(-3.87)	(-0.96)	(6.47)	(3.87)	(7.09)	(16.83)
Time	-0.001	0.000	0.007	-0.001	-0.000	-0.001	0.001
	(-1.44)	(0.83)	(5.68)	(-1.31)	(-0.83)	(-1.49)	(0.62)
Observations	48	48	48	48	48	48	48
Adjusted R^2	0.060	0.060	0.496	0.016	-0.009	0.062	-0.005

Statistics are based on variables that are demeaned by industry-year. Definitions of variables are provided in Appendix A. T-statistics in Panel A are based on standard errors clustered by industry and year. T-statistics in Panel B are based on Newey-West standard errors adjusted for autocorrelation with a lag of three year.

Panel C: Annual earnings-return regressions

year	RET	RET_TW	DIST_EQ	Adjusted R2	N	ENDRECOG	MATCHRECOG	TOTALRECOG
1970	0.085	-0.024	-0.103	0.442	592	0.061	0.012	0.073
1971	0.072	-0.005	0.021	0.394	865	0.067	0.003	0.070
1972	0.064	-0.009	-0.002	0.431	988	0.055	0.005	0.060
1973	0.126	-0.066	0.019	0.273	1,048	0.061	0.033	0.093
1974	0.356	-0.199	-0.069	0.384	1,047	0.158	0.099	0.257
1975	0.180	-0.005	0.252	0.291	1,359	0.176	0.002	0.178
1976	0.175	-0.027	0.088	0.399	1,372	0.148	0.014	0.162
1977	0.179	-0.024	0.013	0.394	1,303	0.155	0.012	0.167
1978	0.160	-0.085	0.026	0.438	1,327	0.075	0.043	0.117
1979	0.176	-0.126	0.068	0.305	1,317	0.050	0.063	0.113
1980	0.137	-0.078	0.099	0.342	1,311	0.059	0.039	0.098
1981	0.114	0.036	0.073	0.387	1,335	0.151	-0.018	0.133
1982	0.161	-0.103	0.169	0.309	1,283	0.058	0.051	0.110
1983	0.163	-0.120	0.131	0.332	1,312	0.043	0.060	0.103
1984	0.179	-0.068	0.100	0.372	1,414	0.112	0.034	0.145
1985	0.134	0.017	0.037	0.414	1,249	0.151	-0.008	0.143
1986	0.139	-0.029	0.024	0.351	1,278	0.110	0.014	0.124
1987	0.160	-0.088	0.040	0.286	1,507	0.072	0.044	0.116
1988	0.131	0.083	0.052	0.346	1,470	0.214	-0.042	0.173
1989	0.148	-0.024	0.099	0.343	1,540	0.124	0.012	0.136
1990	0.201	-0.103	0.131	0.331	1,552	0.098	0.051	0.150
1991	0.111	-0.001	0.128	0.267	1,532	0.110	0.000	0.111
1992	0.113	0.047	0.137	0.341	1,577	0.160	-0.023	0.137
1993	0.144	-0.088	0.144	0.322	1,613	0.056	0.044	0.100
1994	0.144	-0.069	0.169	0.302	1,686	0.075	0.035	0.110
1995	0.091	-0.039	0.165	0.272	1,807	0.052	0.020	0.072
1996	0.079	0.045	0.182	0.310	1,999	0.124	-0.022	0.102
1997	0.105	0.007	0.132	0.331	2,065	0.112	-0.003	0.108
1998	0.125	-0.102	0.223	0.299	2,064	0.024	0.051	0.074
1999	0.076	-0.062	0.214	0.302	2,056	0.014	0.031	0.045
2000	0.079	0.006	0.204	0.288	1,976	0.086	-0.003	0.083
2001	0.142	0.007	0.150	0.316	1,849	0.149	-0.003	0.146
2002	0.223	-0.059	0.098	0.326	1,858	0.164	0.030	0.193
2003	0.093	-0.059	0.160	0.322	1,765	0.035	0.029	0.064
2004	0.066	0.013	0.106	0.329	1,743	0.078	-0.006	0.072
2005	0.130	-0.089	0.105	0.417	1,732	0.041	0.045	0.085
2006	0.118	-0.046	0.172	0.417	1,715	0.072	0.023	0.095
2007	0.124	-0.065	0.224	0.434	1,657	0.059	0.033	0.091
2008	0.221	-0.064	0.305	0.428	1,610	0.157	0.032	0.189
2009	0.169	-0.110	0.367	0.321	1,546	0.059	0.055	0.114
2010	0.137	-0.105	0.136	0.281	1,529	0.031	0.053	0.084
2011	0.103	-0.010	0.088	0.361	1,493	0.093	0.005	0.098
2012	0.148	-0.067	0.519	0.390	1,476	0.081	0.033	0.114
2013	0.077	-0.016	0.270	0.397	1,466	0.061	0.008	0.069
2014	0.065	0.006	0.168	0.474	1,468	0.071	-0.003	0.068
2015	0.148	-0.039	0.576	0.373	1,441	0.109	0.019	0.128
2016	0.080	0.028	0.261	0.403	1,417	0.108	-0.014	0.094
2017	0.069	-0.015	0.614	0.496	1,011	0.054	0.007	0.061

Table 3
The expanded earnings-return regression

Model (1): IB= b_0 + b_1RET + (b_2-b_1)RET_TW +b_3DRET + b_4DRET*RET + (b_5-b_4)DRET*RET_TW+ + controls e
Model (2): IB= b_0 + b_1RET + (b_2-b_1)RET_TW +b_3D_DIST_EQ + b_4 D_DIST_EQ *RET +
(b_5-b_4) D_DIST_EQ *RET_TW+ controls + e
Model (3): IB= b_0 + b_1RET + (b_2-b_1)RET_TW + b_3DRET + b_4DRET*RET + (b_5-b_4)DRET*RET_TW +
b_6D_DIST_EQ + b_7D_DIST_EQ *RET + (b_8-b_7)D_DIST_EQ *RET_TW +
b_9D_DIST_EQ*DRET + b_{10}D_DIST_EQ*DRET*RET +
(b_{11}- b_{10})D_DIST_EQ*DRET*RET_TW + controls + e

	(1)		(2)		(3)	
VARIABLES	IB	Coeff TIME	IB	Coeff TIME	IB	Coeff TIME
Panel A: Timely Recognition						
ENDRECOG_GNt	**0.013**	-0.001				
	(-2.22)	(-1.39)				
ENDRECOG_BNt	**0.211**	0.000				
	(12.98)	(0.58)				
ENDRECOG_OUTt			**0.083**	-0.001		
			(8.24)	(-1.76)		
ENDRECOG_INt			-0.018	0.001		
			(-1.67)	(1.65)		
ENDRECOG_GN_OUTt					**0.041**	0.000
					(4.22)	(-1.03)
ENDRECOG_BN_OUTt					**0.143**	-0.001
					(5.53)	(-0.83)
ENDRECOG_GN_INt					**-0.031**	0.000
					(-2.92)	(-0.54)
ENDRECOG_BN_INt					**0.072**	0.001
					(3.60)	(1.23)
Panel B: MATCHRECOG						
MATCHRECOG_GNt	**0.017**	-0.001				
	(2.47)	(-1.94)				
MATCHRECOG_BNt	**-0.023**	**0.001**				
	(11.86)	**(2.14)**				
MATCHRECOG_OUTt			**0.038**	0.000		
			(7.33)	(-0.4)		
MATCHRECOG_INt			**-0.024**	0.000		
			(-2.54)	(-1.47)		
MATCHRECOG_GN_OUTt					**0.040**	0.000
					(5.06)	(-0.87)
MATCHRECOG_BN_OUTt					-0.019	0.000
					(-1.04)	(1.03)
MATCHRECOG_GN_INt					**-0.029**	-0.001
					(-2.34)	(-1.51)
MATCHRECOG_BN_INt					-0.007	0.000
					(-0.39)	(0.5)
Panel C: Total Recognition						
TOTALRECOG_GNt	**0.030**	**-0.001**				
	(3.22)	**(-2.55)**				
TOTALRECOG_BNt	0.188	0.001				
	(1.11)	(1.89)				
TOTALRECOG_OUTt			**0.121**	-0.001		

		(14.37)	(-1.66)		
TOTALRECOG_INt		**-0.042**	0.000		
		(-6.41)	(0.61)		
TOTALRECOG_GN_OUTt				**0.081**	-0.001
				(6.17)	(-1.2)
TOTALRECOG_BN_OUTt				**0.124**	0.000
				(6.43)	(-0.12)
TOTALRECOG_GN_INt				**-0.060**	0.000
				(-5.83)	(0.5)
TOTALRECOG_BN_INt				**0.064**	**0.001**
				(4.29)	**(2.13)**
Observations	71,620	71,620		71,620	
Adjusted R^2	0.252	0.253		0.275	

Statistics are based on variables that are demeaned by industry-year. Definitions of variables are provided in Appendix A. T-statistics in Panel A are based on standard errors clustered by industry and year. T-statistics on Time are based on Newey-West standard errors adjusted for autocorrelation with a lag of three year.

Table 4
The free cash flow-return regression

Model (1): $IB = b_0 + b_1RET + b_2DIST\_EQ + b_3*DRET + b_4DRET*RET + b_5DRET*DIST\_EQ + controls + e$
Model (2): $IB = b_0 + b_1RET + b_2DIST\_EQ + b_3*D\_DIST\_EQ + b_4D\_DIST\_EQ*RET + b_5D\_DIST\_EQ*DIST\_EQ + controls + e$
Model (3): $IB = b_0 + b_1RET + b_2DIST\_EQ + b_3*D\_DIST\_EQ + b_4D\_DIST\_EQ*RET + b_5D\_DIST\_EQ*DIST\_EQ + b_6D\_DIST\_EQ*DRET + b_7 D\_DIST\_EQ*DRET*RET + b_8D\_DIST\_EQ*DRET* DIST\_EQ + controls + e$

	(1)		(2)		(3)	
		Coeff		Coeff		Coeff
VARIABLES	IB	TIME	IB	TIME	IB	TIME
RET	**0.037**	-0.001	**0.121**	-0.001	**0.077**	-0.001
	(3.64)	(-1.82)	**(13.41)**	(-1.43)	**(5.83)**	(-1.11)
DIST_EQ	**0.173**	**0.006**	-0.072	0.000	-0.007	-0.003
	(6.63)	**(3.73)**	(-1.13)	(-0.06)	(-0.14)	(-1.04)
DRET	0.003	0.000			0.012	0.000
	(0.61)	(3.64)			(1.80)	(3.28)
DRET*RET	**0.183**	0.001			**0.129**	0.000
	(13.32)	(1.16)			**(6.81)**	(0.44)
DRET*DIST_E	-0.002	0.002			-0.074	0.004
	(-0.08)	(1.37)			(-1.02)	(1.89)
D_DIST_EQ			-0.050	0.000	-0.027	0.001
			(-6.34)	(0.76)	(-3.77)	(2.68)
D_DIST_EQ*RET			**-0.036**	0.000	**-0.051**	0.000
			(-5.21)	(1.83)	**(-4.89)**	(-1.30)
D_DIST_EQ*DIST_EQ			**0.226**	**0.013**	**0.129**	**0.017**
			(3.56)	**(3.40)**	**(2.11)**	**(4.82)**
D_DIST_EQ*DRET					-0.010	-0.001
					(-1.86)	(-2.77)
D_DIST_EQ*DRET*RET					**0.057**	0.000
					(3.60)	(0.68)
D_DIST_EQ*DRET*DIST_EQ					0.137	**-0.008**
					(1.55)	**(-2.27)**
Observations	71,620		71,620		71,620	
Adjusted R^2	0.266		0.258		0.280	

Statistics are based on variables that are demeaned by industry-year. Definitions of variables are provided in Appendix A. T-statistics in Panel A are based on standard errors clustered by industry and year. T-statistics on Time are based on Newey-West standard errors adjusted for autocorrelation with a lag of three year.

Table 5 Income Statement Dissection of Earnings/Return Relation

VARIABLES	(1) SALE	(2) EXP	(3) COGS	(4) XSGA	(5) DP	(6) XINT	(7) NOPI	(8) SPI	(9) TXT	(10) MII
Panel A: coefficients										
ENDRECOG_GN_OUTt	0.209	-0.167	-0.078	-0.069	**-0.007**	-0.001	-0.002	-0.005	**-0.020**	0.000
	(1.11)	(0.37)	(0.25)	(-0.25)	**(2.45)**	(-1.20)	(-1.86)	(1.4)	**(-4.06)**	(-1.42)
ENDRECOG_BN_OUTt	-0.017	0.160	0.001	0.110	**0.021**	**0.018**	-0.004	-0.043	-0.037	0.000
	(-0.04)	(0.99)	(0.75)	(-0.09)	**(-2.10)**	**(2.01)**	(0.32)	(0.47)	(1.19)	(-0.84)
ENDRECOG_GN_INt	-0.166	**0.136**	**0.088**	0.041	-0.001	-0.001	0.002	0.004	0.014	0.000
	(-1.17)	**(-3.50)**	**(-3.63)**	(1.23)	(-1.77)	(-0.19)	(-1.23)	(-0.3)	(-0.48)	(0.81)
ENDRECOG_BN_INt	0.350	-0.278	-0.253	-0.025	-0.008	-0.005	0.001	**-0.007**	0.009	**-0.001**
	(1.25)	(0.56)	(-1.12)	(-0.73)	(-0.09)	(1.92)	(0.11)	**(-2.54)**	(-1.90)	**(-2.04)**
MATCHRECOG_GN_OUTt	**0.529**	-0.489	-0.370	-0.076	**-0.012**	-0.005	-0.001	-0.001	**-0.027**	0.000
	(3.62)	(-0.99)	(-0.44)	(1.92)	**(1.99)**	(-0.36)	(-0.16)	(-0.77)	**(-3.01)**	(-0.71)
MATCHRECOG_BN_OUTt	-0.133	0.114	0.096	**-0.007**	0.007	-0.001	-0.001	**-0.004**	0.015	-0.001
	(-0.41)	(2.50)	(0.00)	**(-3.38)**	(1.92)	(-1.62)	(-0.34)	**(-5.80)**	(-1.15)	(-1.08)
MATCHRECOG_GN_INt	**-0.398**	0.369	0.296	0.035	0.010	0.004	0.000	-0.001	**0.023**	0.001
	(-2.55)	(0.37)	(0.42)	(-0.40)	(0.83)	(1.67)	(1.15)	(-0.38)	**(-3.8)**	(-1.26)
MATCHRECOG_BN_INt	0.139	-0.146	**-0.097**	**-0.019**	-0.013	-0.002	-0.001	0.002	**-0.013**	0.000
	(0.44)	(-1.19)	**(2.17)**	**(-2.13)**	(-1.33)	(-1.44)	(-0.83)	(-1.48)	**(2.45)**	(1.84)
TOTALRECOG_GN_OUTt	**0.738**	**-0.657**	-0.447	-0.145	-0.019	-0.005	-0.003	-0.005	-0.048	0.000
	(2.75)	**(2.24)**	(-1.23)	(1.52)	(-0.84)	(-0.84)	(0.22)	(-0.79)	**(-2.61)**	(0.35)
TOTALRECOG_BN_OUTt	-0.150	0.273	0.097	0.103	**0.027**	0.017	-0.005	-0.047	-0.022	-0.001
	(-0.30)	(-0.48)	(-0.51)	(0.93)	**(2.60)**	(-0.19)	(-1.34)	(-0.74)	(0.96)	(-0.57)
TOTALRECOG_GN_INt	**-0.564**	**0.504**	0.384	0.076	**0.010**	0.004	0.002	0.003	0.037	0.000
	(-2.41)	**(-2.56)**	**(-2.22)**	(1.49)	**(-3.83)**	(-0.12)	(1.38)	(1.14)	**(2.98)**	(0.25)
TOTALRECOG_BN_INt	0.489	-0.425	-0.350	-0.044	**-0.021**	-0.008	0.001	**-0.004**	-0.004	-0.001
	(1.33)	(-0.93)	**(2.67)**	**(-2.34)**	**(-2.12)**	(1.18)	(-0.15)	**(-3.60)**	**(3.76)**	(-0.97)
Observations	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620
Adjusted R2	0.528	0.536	0.512	0.336	0.405	0.781	0.060	0.048	0.135	0.004

VARIABLES	(1) SALE	(2) EXP	(3) COGS	(4) XSGA	(5) DP	(6) XINT	(7) NOPI	(8) SPI	(9) TXT	(10) MII
Panel B: Timetrends										
ENDRECOG_GN_OUTt	0.000	-0.001	-0.004	0.002	0.000	0.000	0.000	0.000	**0.001**	0.000
	(0.08)	(-0.15)	(-0.75)	(1.7)	(0.14)	(-0.77)	(0.85)	(1.02)	**(3.14)**	(-1.66)
ENDRECOG_BN_OUTt	-0.019	0.018	0.011	0.003	0.000	0.000	0.000	**-0.002**	**0.002**	0.000
	(-1.10)	(1.07)	(0.80)	(0.90)	(0.11)	(-0.27)	(-0.51)	**(-6.14)**	**(3.06)**	(0.82)
ENDRECOG_GN_INt	-0.005	0.005	0.007	-0.002	0.000	0.000	0.000	0.000	**-0.001**	0.000
	(-0.57)	(0.54)	(0.74)	(-1.42)	(0.86)	(0.20)	(-1.12)	(0.98)	**(-2.20)**	(1.15)
ENDRECOG_BN_INt	0.020	-0.020	-0.013	-0.005	0.000	0.000	0.000	0.001	0.000	0.000
	(1.43)	(-1.37)	(-0.9)	(-0.93)	(-0.67)	(-0.76)	(1.27)	(1.73)	(0.55)	(-0.31)
MATCHRECOG_GN_OUTt	-0.007	0.007	0.010	-0.003	0.000	0.000	0.000	0.000	0.000	0.000
	(-1.24)	(1.23)	(2.22)	(-1.93)	(-0.62)	(1.11)	(0.02)	(-1.95)	(1.27)	(1.44)
MATCHRECOG_BN_OUTt	0.000	0.000	-0.003	0.003	0.000	0.000	0.000	0.000	**-0.001**	0.000
	(0.04)	(0.01)	(-0.37)	(1.51)	(1.6)	(-1.49)	(0.24)	(-0.38)	**(-1.97)**	(-2.15)
MATCHRECOG_GN_INt	0.003	-0.004	-0.007	0.003	0.000	0.000	0.000	0.000	0.000	0.000
	(0.28)	(-0.35)	(-0.73)	(1.67)	(-0.03)	(-0.63)	(0.27)	(-0.22)	(0.90)	(-1.37)
MATCHRECOG_BN_INt	0.002	-0.001	0.002	-0.003	0.000	0.000	0.000	0.000	0.000	0.000
	(0.14)	(-0.11)	(0.14)	(-1.00)	(-0.79)	(1.18)	(-0.40)	(0.17)	(0.12)	(1.75)
TOTALRECOG_GN_OUTt	-0.007	0.006	0.006	-0.001	0.000	0.000	0.000	0.000	**0.002**	0.000
	(-1.67)	(1.57)	(1.72)	(-0.86)	(-0.73)	(0.43)	(1.51)	(-0.48)	**(3.64)**	(-1.46)
TOTALRECOG_BN_OUTt	-0.018	0.018	0.009	0.006	0.001	0.000	0.000	**-0.002**	**0.001**	0.000
	(-1.67)	(1.69)	(0.95)	(2.43)	(1.57)	(-1.24)	(-0.66)	**(-7.81)**	**(2.88)**	(-1.62)
TOTALRECOG_GN_INt	-0.002	0.001	0.000	0.001	0.000	0.000	**0.000**	0.000	0.000	0.000
	(-0.40)	(0.24)	(0.02)	(0.88)	(1.42)	(-0.46)	**(-2.01)**	(1.51)	(-1.57)	(-0.11)
TOTALRECOG_BN_INt	**0.022**	**-0.021**	-0.011	**-0.008**	-0.001	0.000	**0.000**	**0.001**	0.000	0.000
	(3.17)	**(-3.00)**	(-1.76)	**(-2.40)**	(-1.40)	(0.46)	**(2.12)**	**(2.72)**	(0.63)	(1.34)

Statistics are based on variables that are demeaned by industry-year. Definitions of variables are provided in Appendix A. T-statistics in Panel A are based on standard errors clustered by industry and year. T-statistics on Time are based on Newey-West standard errors adjusted for autocorrelation with a lag of three year.

Table 6 Income Statement Dissection of Free Cash Flow/Return Relation

VARIABLES	(1) SALE	(2) EXP	(3) COGS	(4) XSGA	(5) DP	(6) XINT	(7) NOPI	(8) SPI	(9) TXT	(10) MII
Panel A: coefficients										
RETt	**0.763**	**-0.687**	**-0.475**	**-0.149**	**-0.018**	-0.006	-0.003	**-0.005**	**-0.046**	-0.000
	(2.93)	**(-2.76)**	**(-2.43)**	**(-3.57)**	**(-3.67)**	(-1.66)	(-1.84)	**(-2.19)**	**(-4.10)**	(-0.91)
DIST_EQt	**-4.540**	**4.533**	**3.699**	**0.658**	0.007	**0.048**	-0.005	-0.019	**0.090**	0.007
	(-4.38)	**(4.50)**	**(4.92)**	**(2.79)**	(0.36)	**(3.11)**	(-0.46)	(-1.70)	**(3.18)**	(1.00)
DRET	0.153	-0.141	-0.122	-0.025	-0.003	-0.002	-0.002	-0.005	0.004	-0.000
	(2.64)	(-2.55)	(-2.67)	(-2.13)	(-1.78)	(-1.30)	(-2.74)	(-2.12)	(1.21)	(-1.39)
DRET*RETt	-0.345	0.474	0.267	0.129	**0.029**	**0.021**	-0.004	**-0.047**	-0.022	-0.000
	(-0.73)	(1.03)	(0.75)	(1.59)	**(2.72)**	**(2.39)**	(-1.07)	**(-5.86)**	(-1.92)	(-0.40)
DRET*DIST_EQt	**-1.173**	**1.099**	**0.952**	0.146	**0.054**	**0.034**	0.029	0.047	-0.025	**0.014**
	(-2.39)	**(2.35)**	**(2.22)**	(1.14)	**(3.55)**	**(2.83)**	(1.85)	(1.43)	(-1.02)	**(2.22)**
D_DIST_EQ	-0.935	0.908	0.734	0.132	0.009	0.012	0.005	0.003	0.030	-0.000
	(-5.05)	(5.06)	(5.28)	(4.09)	(2.47)	(4.07)	(3.45)	(1.78)	(4.95)	(-0.15)
D_DIST_EQ*RETt	**-0.657**	**0.606**	**0.460**	**0.093**	**0.012**	**0.006**	0.003	0.001	**0.038**	0.001
	(-2.85)	**(2.73)**	**(2.64)**	**(2.41)**	**(2.31)**	**(1.96)**	(1.59)	(0.59)	**(3.93)**	(1.59)
D_DIST_EQ*DIST_EQt	**3.717**	**-3.588**	**-3.034**	**-0.522**	0.043	-0.011	0.012	-0.008	**-0.063**	0.002
	(3.81)	**(-3.76)**	**(-4.30)**	**(-2.27)**	(2.02)	(-0.66)	(0.99)	(-0.58)	**(-2.11)**	(0.27)
D_DIST_EQ*DRET	**-0.172**	**0.162**	**0.128**	**0.031**	0.002	0.002	0.002	-0.000	0.001	0.000
	(-2.78)	**(2.72)**	**(2.61)**	**(2.29)**	(1.13)	(1.59)	(1.69)	(-0.02)	(0.41)	(0.25)
D_DIST_EQ*DRET*RETt	**0.723**	-0.666	**-0.541**	-0.084	**-0.024**	-0.012	-0.000	-0.004	-0.007	**-0.002**
	(2.05)	(-1.94)	**(-2.00)**	(-1.39)	**(-2.33)**	(-1.86)	(-0.04)	(-0.72)	(-0.71)	**(-2.77)**
D_DIST_EQ*DRET*DIST_EQt	**1.123**	**-0.986**	**-0.879**	-0.123	**-0.040**	**-0.028**	-0.016	**-0.075**	0.013	**-0.020**
	(2.15)	**(-2.01)**	**(-1.99)**	(-0.89)	**(-2.31)**	**(-2.33)**	(-0.97)	**(-1.98)**	(0.48)	**(-2.68)**
Observations	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620	71,620
Adjusted R^2	0.534	0.543	0.519	0.339	0.407	0.784	0.061	0.050	0.135	0.013

VARIABLES	(1) SALE	(2) EXP	(3) COGS	(4) XSGA	(5) DP	(6) XINT	(7) NOPI	(8) SPI	(9) TXT	(10) MII
Panel B: Timetrends										
RETt	-0.004	0.003	-0.001	0.000	0.000	0.000	0.000	**0.002**	0.000	0.004
	(-0.99)	(0.83)	(-0.69)	(-0.62)	(0.4)	(1.02)	(-0.35)	**(3.67)**	(-1.93)	(0.89)
DIST_EQt	-0.002	-0.001	-0.008	0.001	0.000	0.000	0.000	**0.005**	0.001	-0.001
	(-0.05)	(-0.03)	(-1.09)	(0.72)	(0.58)	(0.05)	(-0.17)	**(4.59)**	(1.51)	(-0.05)
DRET	-0.002	0.002	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.002
	(-1.10)	(1.16)	(0.35)	(0.11)	(0.64)	(-0.1)	**(-2.78)**	(0.46)	(-0.21)	(1.27)
DRET*RETt	**-0.023**	0.014	**0.006**	0.001	0.000	0.000	**-0.002**	**0.001**	0.000	**0.023**
	(-2.08)	(1.50)	**(2.51)**	(1.68)	(-0.82)	(-0.64)	**(-8.38)**	**(3.44)**	(-0.35)	**(2.13)**
DRET*DIST_EQt	-0.003	-0.003	0.014	0.000	0.000	-0.001	0.000	**-0.004**	0.000	0.007
	(-0.14)	(-0.11)	(1.73)	(-0.3)	(0.69)	(-0.66)	(0.2)	**(-2.96)**	(-0.85)	(0.30)
D_DIST_EQ	0.008	-0.007	-0.001	0.000	0.000	0.000	0.000	**-0.001**	**0.000**	-0.008
	(1.43)	(-1.35)	(-0.59)	(-0.15)	(0.72)	(0.38)	(0.80)	**(-2.06)**	**(2.68)**	(-1.33)
D_DIST_EQ*RETt	-0.002	0.000	0.001	0.000	0.000	**0.000**	0.000	0.000	0.000	0.002
	(-0.36)	(0.04)	(1.01)	(1.45)	(-0.08)	**(-2.07)**	(0.41)	(-1.84)	(1.19)	(0.30)
D_DIST_EQ*DIST_EQt	0.045	-0.034	0.014	0.000	0.000	-0.001	-0.001	**-0.011**	0.000	-0.029
	(1.19)	(-1.04)	(1.68)	(-0.28)	(0.69)	(-1.04)	(-1.15)	**(-3.98)**	(-0.75)	(-0.79)
D_DIST_EQ*DRET	0.003	-0.001	-0.003	0.000	0.000	0.000	**0.000**	0.000	0.000	**-0.004**
	(1.55)	(-0.6)	(-1.72)	(-0.46)	(-0.2)	(-0.54)	**(2.53)**	(1.42)	(-0.47)	**(-2.04)**
D_DIST_EQ*DRET*RETt	**0.027**	-0.015	**-0.009**	-0.001	0.000	0.000	**0.001**	0.000	0.000	**-0.026**
	(3.23)	(-1.73)	**(-2.51)**	(-1.73)	(-0.32)	(1.54)	**(2.72)**	(0.4)	(-0.71)	**(-3.29)**
D_DIST_EQ*DRET*DIST_EQt	0.004	0.012	**-0.029**	0.000	**-0.002**	0.000	0.000	**0.006**	0.000	-0.012
	(0.07)	(0.24)	**(-2.03)**	(-0.10)	**(-2.00)**	(0.16)	(-0.15)	**(2.44)**	(-1.01)	(-0.23)

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Table 7 Free cash flow return analysis of components

VARIABLES	(1) CIB	(2) CREV	(3) CEXP	(4) OCI	(5) GDWLIP	(6) GLP	(7) XRD
RETt	**0.088**	**0.556**	**-0.468**	0.002	-0.029	-0.009	**-0.021**
	(3.88)	**(2.56)**	**(-2.38)**	(1.46)	(-1.09)	(-1.32)	**(-4.50)**
DIST_EQt	**0.204**	0.580	-0.376	**-0.031**	-0.129	0.037	-0.014
	(3.13)	(0.97)	(-0.67)	**(-2.52)**	(-1.38)	(1.87)	(-0.86)
DRET	0.010	**0.096**	**-0.086**	0.002	-0.003	0.000	-0.001
	(1.65)	**(2.64)**	**(-2.58)**	(1.90)	(-0.36)	(0.08)	(-0.42)
DRET*RETt	-0.019	**-0.706**	**0.687**	0.001	**-0.106**	0.006	**0.029**
	(-0.43)	**(-1.99)**	**(2.16)**	(0.39)	**(-3.02)**	(0.57)	**(3.95)**
DRET*DIST_EQt	**-0.186**	**-1.421**	**1.235**	-0.016	0.093	0.001	0.001
	(-2.72)	**(-3.76)**	**(3.70)**	(-1.51)	(0.78)	(0.02)	(0.05)
D_DIST_EQ	-0.004	-0.105	0.102	**0.006**	-0.006	-0.003	**-0.014**
	(-0.57)	(-1.27)	(1.24)	**(4.31)**	(-0.38)	(-0.71)	**(-4.66)**
D_DIST_EQ*RETt	**-0.041**	**-0.268**	0.227	**-0.003**	0.026	0.005	-0.000
	(-2.58)	**(-2.01)**	(1.69)	**(-2.42)**	(1.14)	(0.41)	(-0.05)
D_DIST_EQ*DIST_EQt	-0.011	-0.974	0.963	0.010	0.153	-0.054	**0.053**
	(-0.15)	(-1.40)	(1.44)	(0.81)	(1.34)	(-1.65)	**(3.21)**
D_DIST_EQ*DRET	-0.007	-0.106	0.099	**-0.003**	0.033	0.006	-0.002
	(-0.59)	(-1.80)	(1.78)	**(-2.93)**	(1.90)	(0.62)	(-0.54)
D_DIST_EQ*DRET*RETt	**0.079**	**0.527**	**-0.448**	0.001	0.031	0.018	-0.007
	(2.40)	**(2.57)**	**(-2.36)**	(0.19)	(0.84)	(0.97)	(-0.79)
D_DIST_EQ*DRET*DIST_EQt	**0.295**	**1.842**	**-1.547**	0.008	-0.194	-0.019	0.011
	(3.09)	**(3.37)**	**(-2.99)**	(0.82)	(-1.34)	(-0.30)	(0.69)
Observations	22,178	22,178	22,178	62,831	2,781	3,760	43,869
Adjusted R2	0.125	0.560	0.553	0.034	0.213	0.053	0.128

Statistics are based on variables that are demeaned by industry-year. Definitions of variables are provided in Appendix A. T-statistics in Panel A are based on standard errors clustered by industry and year.