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# Are investors inattentive to the information content of advance receipts?

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#### ABSTRACT

Advance receipts reflect implicit performance information, as they measure unearned revenue such that cash is received before the revenue can be recognised. This paper examines the information content and related pricing impact of advance receipts. We find that (1) advance receipts are positively related to firms' future performance after controlling for revenue and earnings growth, (2) advance receipts are associated with positive short-term price impacts but substantially larger subsequent returns, (3) order-flow imbalance during the financial reporting window is unrelated to advance receipts but is strongly and positively related to revenue and earnings growth, (4) a long-short trading strategy constructed on advance receipts generates monthly abnormal returns of 0.5% to 1%, and (5) after the enactment of the new revenue standard, we document a comparable pricing pattern in contract liability. We conclude that investors disregard advance receipts because of habitual thinking, which creates an anomaly in the A-share stock market.

#### **KEYWORDS**

Advance receipts; implicit performance information; habitual thinking; anomaly

# 1. Introduction

It is common sense that a firm's balance sheet reports its financial conditions, and the income statement reports its operating performance. Therefore, investors naturally examine income statement items such as sales and earnings to gauge firm profitability. However, because of this cognitive inertia, investors can fail to notice the likelihood that advance receipts – a balance sheet item – also contain performance information

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Advance receipts reflect transactions occurring prior to revenue recognition and are thus directly tied to the firm's future performance.<sup>1</sup> For example, real estate enterprises sell off-plan projects to buyers; Guizhou Maotai receives substantial prepaid orders from distributors during periods of high market demand. In neither case can a firm recognise revenue until the product is delivered. Nonetheless, investors should consider advance receipts to assess the profitability of enterprises as long as they are aware of the business model of the real estate sector and Guizhou Maotai (Liu & Liu, 2012).

According to accounting principles, advance receipts are categorised as operating liabilities since they constitute the commitment to goods delivery and services obligations. As a result, advance receipts do not appear on the income statement, which is where investors often look for performance information. Instead, advance receipts are shown on the balance sheet, which has a different purpose from that of the income statement. Furthermore, some investors can even perceive advance payments as negative items because liabilities often reflect future benefit outflows. Therefore, the location of advance receipts (on the balance sheet) largely differs significantly from how investors typically think about financial statements and accounting components. This could have an impact on how investors gather information and make decisions (Hirshleifer & Teoh, 2003; Luo et al., 2018; Tversky & Kahneman, 1974, 1981). As a result, investors are inclined to overlook advanced receipts declared on the balance sheet and underestimate their impact on future performance.

Are investors attentive to the performance information reflected in advance receipts? If not, what are the economic consequences? We create a quarterly sample of all nonfinancial listed corporations in the A-share stock market from 2004 to 2019 and run a series of empirical tests to answer the aforementioned questions. Our findings are as follows.

- (1) The change in advance receipts (the change in advance receipts multiplied by profit margin) is significantly predictive of sales and earnings growth in the next 1 to 4 quarters. The concurrent explicit performance measurements (sales and earnings) provided on the income statement have no bearing on this forecasting capacity. Our findings suggest that rational investors should not disregard advance receipts since they offer additional performance information beyond sales and earnings.
- (2) Upon the disclosure of financial reports, we discover three pieces of evidence showing that investors are less attentive to advance receipts than they are to sales and earnings, which are concurrent income statement performance measures. First, on the EastMoney discussion forums, posts about advance receipts are far fewer than those about sales and earnings. Second, the magnitude of the shortterm price impact of advance receipts is substantially smaller than that of sales and

<sup>&</sup>lt;sup>1</sup>The sample period for most of the tests is from 2004 to 2019, before the complete implementation of the new revenue standard. Under the new revenue standard, most of the transactions that were previously recorded as advance receipts have been replaced by contract liabilities. Presently, only advance payments from customers that do not represent obligations for the delivery of goods or the provision of services are recorded in advance receipts. It should be highlighted that the main conclusion of our paper is not significantly affected by the standard change as long as investors are not attentive to the performance-related items on the balance sheet (advance revenues under the old standard and contract liabilities under the new standard). We also obtain similar findings that investor neglect contract liability during 2021 Q1 and 2022 Q2. Unless otherwise specified, when discussing advance receipts, we are referring to the period before the enactment of the new revenue standard.

earnings growth. Third, utilising high-frequency data, we find that neither retail nor institutional investors trade stocks in accordance with advance receipts. However, a strong positive correlation exists between sales and earnings growth and order-flow imbalance indicators of both institutional and retail investors.

- (3) The long-term pricing impacts of advance receipts post financial report are statistically positive and monotonically increasing with *t* (*BHAR*[2, 10], *BHAR*[2, 30], *BHAR* [2, 60], *BHAR*[2, 120], and *BHAR*[2, 250]). In particular, the long-term price impact *BHAR*[2, 250] is approximately 20 to 30 times larger than the short-term price impact *BAHR*[-1, 1].
- (4) The change in advance receipts (the change in advance receipts multiplied by profit margin) also is a significant predictor of earnings announcement returns for the following four quarters, implying that the ex post performance significantly exceeds investors' ex ante expectations.

These findings show that the market is sluggish in incorporating the information content of advance receipts. To further investigate the underlying mechanism, we conduct two additional tests. We first differentiate investors' habitual thinking from limited attention. In line with Da et al. (2011), we evaluate investor attention using internet search volume and find that while high attention greatly enhances the pricing impact of sales and earnings growth, it has no impact on the pricing of advance receipts. In addition, the positive correlations between investor trading and sales and earnings growth are also greatly amplified by high attention; however, these benefits do not hold for advance receipts. The aforementioned findings are not easily explained by limited attention but are highly consistent with investors' habitual thinking about financial statements. Then, we examine analysts' ability to correctly understand advance receipts. As we discover that the ex post realised performance greatly exceeds analysts' ex ante estimates, our findings demonstrate that analysts, who are experts in stock market, also undervalue the performance information included in advance receipts.

We also construct a trading strategy utilising investors' inattention to advance receipts. At the beginning of each month, we buy stocks whose change in advance receipts (change in advance receipts multiplied by profit margin) is in the top decile and short stocks whose change is in the bottom decile. During the sample period, this trading strategy can earn 0.5%–1% risk-adjusted portfolio returns. As the abnormal returns persist after controlling for CAPM, FF-3 or FF-5 risk factors, the long-term price impact of advance receipts is unlikely to be the compensation for undertaking more risks.

Given that the majority of transactions previously recorded as advance receipts have been replaced by contract liabilities after the complete enactment of the new revenue standard, we observe contract liabilities during 2021 Q1 and 2021 Q2 (the most recent available data at the time of the writing of this paper) to ensure the validity of our findings in the new revenue standard era. We document that investors' ignorance of balance sheet performance information due to habitual thinking persists, as we obtain comparable results in contract liabilities.

Our paper adds to the literature in two aspects. First, prior literature mainly examines whether investors overestimate the persistence of accruals and tests the asset pricing implications of the timing mismatch between cash flows and accounting profit recognition (Hirshleifer et al., 2004; Li & Niu, 2007; Richardson et al., 2005; Sloan, 1996; Xie, 2001).

In contrast, we looks at the same mismatch problem but from the opposite side (cash flow ahead of accounting recognition) and present evidence of the inefficient pricing of advance receipts.

Second, we also highlight the crucial role of investors' habits of using financial reports on the efficacy of information disclosure (Hirshleifer & Teoh, 2003; Luo et al., 2018). Prior studies demonstrate a variety of behavioural biases, including limited attention (DellaVigna & Pollet, 2009; Hirshleifer et al., 2009), representativeness (Barberis et al., 1998; Lakonishok et al., 1994), overconfidence (Daniel et al., 1998), anchoring bias (Chang et al., 2017), and confirmation bias (Pouget et al., 2017). Through our research, we show that investors' processing of financial information is also hampered by habitual thinking.

Our paper also has implications for the standard setters. Although the new revenue standard aims to provide a broad framework for revenue recognition, it also introduces a number of new statement items and complicates the timing problems between cash flows and accounting recognition. Therefore, to fully assess the new revenue standard, we advise standard setters to pay particular attention to whether investors can understand new statement items, such as contract assets and contract liabilities, and whether investors can correctly interpret the relationship between these new statement items and the firm's current performance, future performance, and cash flows.

Finally, we discover a new anomaly in the A-share stock market and thus provide trading insights. On the one hand, we suggest that investors pay close attention to implicit performance information, such as that reflected in advance receipts and contract liabilities. On the other hand, exploiting investors' habitual thinking and trading on advance receipts can earn substantial excess returns.

Our paper proceeds as follows. Section 2 provides a review of the related literature and a theoretical analysis. Section 3 describes the research designs. Section 4 provides a discussion of the main empirical findings. Section 5 provides additional analyses, and the last section concludes.

# 2. Literature review and theoretical analysis

Under accrual basis accounting, revenue recognition adheres to the realisation principle based on the fulfilment of contractual obligations rather than the actual receipt of cash. A company can fully recognise revenue regardless of cash receipts as long as the revenue recognition conditions are satisfied. As a result, both accounting academia and professions are highly sensitive to aggressive accounting practices adopted by firms to inflate sales and earnings, such as the notorious earnings manipulation before IPOs and SEOs (Teoh et al., 1998a; 1998b).

A number of studies examine the asset pricing implications of accrual accounting. The seminal work of Sloan (1996) shows that investors fixate on earnings and fail to distinguish the persistence of the cash flow and accrual components. Consequently, stocks with higher proportions of accrual earnings have lower subsequent returns, i.e. the accrual anomaly. Follow-up studies, including Xie (2001), Hirshleifer et al. (2004), and Richardson et al. (2005), confirm that overestimating the persistence of accrual earnings is the primary reason for the mispricing of accruals. Although advance receipts, which are also the result of accrual accounting, exhibit a high percentage of concurrent sales and earnings of listed

firms (see Figures 1 and 2), very few studies work on whether investors are able to anticipate the performance implications of advance receipts when cash inflows precede revenue recognition, as well as the consequent effects on stock prices.

If the stock market is efficient (Fama, 1970, 1991), sophisticated investors should fully comprehend the performance implications of advance receipts and promptly incorporate this information into stock prices. In practice, however, investors' ability to process information is constrained. As a result, alternative means of presenting information usually have different implications on investor perceptions and stock prices (Hirshleifer & Teoh, 2003), and we posit that there are barriers that indeed prevent investors from accessing the performance information reflected in advance receipts.

Investors do not view advance receipts as implicit performance measures unless they comprehend accrual basis accounting and the resultant time discrepancy between revenue recognition and cash settlements. However, a substantial number of investors might not have such financial literacy; as of the end of 2016, 74.7% of A-share investors had a junior college or lower education level, according to the Shanghai Stock Exchange Statistical Yearbook (Volume 2016).<sup>2</sup> Recent behavioural finance papers further show that many fundamental financial concepts thought to be common knowledge are actually not common knowledge at all. For example, Birru (2015) and Chang et al. (2017) document that many investors are not aware of the ex-right price adjustment after stock splits. Hartzmark et al. (2022) find that investors often solely consider capital gains as stock returns, although it is 'almost universally agreed' that stock returns have two sources, capital gains and dividends.

We propose that investors are not necessarily attentive to advance receipts even if they are knowledgeable about them because humans rely on heuristics in decision making (Tversky & Kahneman, 1974). To be more responsive to similar situations, humans typically create a set mode to address a specific type of problem by accumulating learning and experience. Although this procedural thinking improves human problem-solving effectiveness, it also makes people less adaptable when faced with unusual circumstances. As we all know, investors learn from financial accounting or financial statement analysis lessons to extract performance information from the income statement to analyse a firm's profitability. However, because advance receipts are not included on the income statement, investors may engage in stereotypical thinking for financial statements, which might result in insufficient attention to advance receipts. Zhai and Luo (2014) and Luo et al. (2018) provide a terrific example of how investors use financial information in a hidebound manner. In 2007, the new accounting standards moved investment income from below to above the line of operating profits. They find that although investment income is vulnerable to manipulations, investors nevertheless perceive operating income, which is contaminated by the noise of investment income, as core earnings.

Humans are also narrow-framed in their decision process (Tversky & Kahneman, 1981), which reflects that the formation of a problem could significantly affect their ultimate choices. As the balance sheet is designed to report a firm's financial conditions, and the income statement is designed to report its operating performance, after deeply accepting the functional positioning of different financial statements, investors would fixate too much on the intended function of a

<sup>&</sup>lt;sup>2</sup>The statistical yearbook published by the SSE after 2017 no longer provides statistics on investor composition.

particular financial statement. Therefore, even though some performance information, such as advance receipts, is readily available on the balance sheet, it would be fairly counterintuitive for investors to seek such information there. Additionally, advance receipts might also contradict how investors often think about liabilities. Advance receipts function more as a temporary shelter for future revenue than they do as liabilities in the traditional sense, which can occasionally be a negative signal because liabilities indicate future outflows of economic benefits. Since most investors frequently view liabilities as neutral or even negative, they are highly likely to be unaware that a special item – advance receipts – on the liabilities side of the balance sheet could convey positive performance information.

Based on the above analysis, due to the habitual thinking about financial statements, we conjecture that investors may ignore the performance information reflected in advance receipts. Nevertheless, once investors fail to consider the performance information in advance receipts, the likelihood is high that they will have biased beliefs of firms' future profitability, which might further lead to mispricing in the stock market. First, regarding quantity, as shown in Figure 1, advance receipts represent up to 12% of listed firms' concurrent sales, and the predicted future income that advance receipts could generate represents up to 10% of their current earnings. Second, regarding quality, advance receipts are timelier than sales and earnings, as they recode economic benefits before accounting recognition. Furthermore, because the cash associated with the advance receipt transactions have already been settled, these transactions are more



■AdvRpt/Rev ■AdvRptNi/Ni

**Figure 1.** Advance receipts relative to sales/earnings during the sample period. This figure reports the average proportion of advance receipts relative to annual sales revenue (blue) and the average proportion of earnings expected to be generated by advance receipts relative to annual earnings (red) during the sample period.

trustworthy than the accrual earnings earned through accounts receivable. Finally, a firm that fully or partially completes cash settlements before completing contractual obligations sends a signal of strong market competitiveness, suggesting that advance receipts might be positively correlated with future performance even in the long run.

Above all, advance receipts provide us with an ideal setting in which to examine whether investors exhibit habitual thinking when they extract financial information from financial statements and test the consequent asset pricing implications.

# 3. Research design

#### 3.1. Sample and data sources

Our initial sample consists of A-share listed companies from 2004Q1 to 2019Q4, and we exclude companies in the financial industry and observations with missing values for the variables required for the analysis.<sup>3</sup> The financial and stock trading data are retrieved from the CSMAR database, and the data on analyst forecasts, high-frequency stock trading and posts on the EastMoney message board data are obtained from the Suntime, RESSET and CnOpenData databases, respectively.

### 3.2. Variable constructions

We construct two variables to measure the performance information reflected in advance receipts. The first measure is  $\Delta AdvRpt_{i,q} = (AdvRpt_{i,q} - AdvRpt_{i,q-4})/MV_{i,q}$ , where the subscripts i and q represent the firm and quarter, respectively.  $AdvRpt_{i,q}$  is the amount of advance receipts at the end of quarter q, and  $MV_{i,a}$  is the market capitalisation of the stock at the end of quarter q. Since advance receipts are expected to be converted into revenue after the delivery of goods or services, we include  $\Delta AdvRpt_{i,a}$  and sales growth  $\Delta Sales_{i,a}$ simultaneously in the regression analysis to ensure that  $\Delta A dv Rpt_{i,a}$  has marginal effects beyond *ASales<sub>i.a</sub>*. This procedure also helps us distinguish the long-run pricing effect of advance receipts from the well-known revenue surprise anomaly (Jegadeesh & Livnat, 2006). Another measure is  $\Delta AdvRptNi_{i,a} = (AdvRpt_{i,a} - AdvRpt_{i,a-4}) \times PM_{i,a}/MV_{i,a}$ , where  $PM_{i,a}$ is the net profit margin of firm *i* in quarter q.<sup>4</sup> We adopt this measure because advanced receipts multiplied by profit margin approximately predict the amount of future earnings that could be generated by advance receipts. When we use  $\Delta A dv Rpt Ni_{i,a}$  as the explanatory variable in the regression analysis, we control ΔEarnings<sub>i,q</sub> to distinguish the effect of \DAdvRptNi, a from that of earnings growth and exclude the price impact of PEAD (Bernad & Thomas, 1989, 1990).

To facilitate the interpretation of the empirical results and to prevent the possibility that the findings are determined by a particular industry, such as the real estate industry, in each quarter and industry, we first transform  $\Delta AdvRpt_{i,q}$  ( $\Delta AdvRptNi_{i,q}$ ) into decile

<sup>&</sup>lt;sup>3</sup>A-share stock market listed companies are required by the CSRC to disclose quarterly reports from 2002q1. Our sample starts from 2004q1 because the estimation of earnings persistence and earnings volatility needs financial data from at least the past 8 quarters. The new revenue standard was fully applied in the A-share stock market after January 1, 2020. Due to the considerable shift in the accounting rules for advance receipts following the adoption of the new standard, our sample ends in 2019q4.

<sup>&</sup>lt;sup>4</sup>We require *PM* to be positive (*PM* > 0). When *PM* is less than zero, we set  $\Delta A dv R p t N i$  as missing values.

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rankings and then standardise it to be in [-0.5, 0.5].<sup>5</sup> Following this procedure, the regression coefficients of *Decile*  $\Delta AdvRpt_{i,q}$  (*Decile*  $\Delta AdvRptNi_{i,q}$ ) estimate the arbitrage portfolio returns of buying the top *Decile* stocks and selling short the bottom *Decile* stocks.

# 3.3. Empirical testing method

We first evaluate the predictive ability of  $\Delta AdvRpt_{i,q}$  and  $\Delta AdvRptNi_{i,q}$  for future performance using Model (1).

Decile 
$$\Delta$$
Sales ( $\Delta$ Earnings)<sub>*i*,*q*+*j*</sub> =  $\beta_1$ Decile  $\Delta$ AdvRpt( $\Delta$ AdvRptNi)<sub>*i*,*q*</sub>  
+  $\beta_2$ Decile  $\Delta$ Sales( $\Delta$ Earnings)<sub>*i*,*q*</sub> +  $\epsilon_{i,t}$  (1)

To maintain comparability among variables, when we use  $Decile \Delta AdvRpt_{i,q}$  as the explanatory variable, the dependent variable is  $Decile \Delta Sales_{i,q+j}$ . At the same time, we control for  $Decile \Delta Sales_{i,q}$  to ensure that  $Decile \Delta AdvRpt_{i,q}$  still has incremental predictability for  $Decile \Delta Sales_{i,q+j}$ ; correspondingly, when we use  $Decile \Delta AdvRptNi_{i,q}$  as the explanatory variable, the dependent variable is  $Decile \Delta Earnings_{i,q+j}$ , and the controlled variable is  $Decile \Delta Earnings_{i,q}$ . We test the predictive ability of  $Decile \Delta AdvRpt_{i,q}$  ( $Decile \Delta AdvRptNi_{i,q}$ ) for the next 4 quarters; that is, the subscript *j* ranges from 1 to 4. We expect a significantly positive regression coefficient  $\beta_1$ .

Next, we use Model (2) to examine the price impact of  $\Delta AdvRpt_{i,q}$  ( $\Delta AdvRptNi_{i,q}$ ) on the short-run financial report window [-1, 1] and multiple long-run postevent windows [2, *t*], where *t* = 0 represents the financial report date.

$$BHAR[t_1, t_2]_{i,q} = \beta_1 Decile \,\Delta AdvRpt(\Delta \,AdvRptNi)_{i,q} + \beta_2 Decile \,\Delta Sales(\Delta Earnings)_{i,q} + \gamma' X_{i,q} + \varepsilon_{i,t}$$
(2)

BHAR[ $t_1, t_2$ ] represents the size-adjusted buy-and-hold abnormal returns during the [ $t_1, t_2$ ] window. At the beginning of each quarter, we divide all A-share firms listed for more than 6 months into 10 portfolios based on their last quarter-end market capitalisation, and the benchmark buy-and-hold returns are computed using the size-decile portfolio to which firm *i* belongs. Consistent with the design of Model (1), when testing *Decile*  $\Delta AdvRpt_{i,q}$ , we control for *Decile*  $\Delta Sales_{i,q}$ . When testing *Decile*  $\Delta AdvRptNi_{i,q}$ , we control for *Decile*  $\Delta Earnings_{i,q}$ .

 $X_{i,q}$  is a vector of control variables. Following Hirshleifer et al. (2009) and DellaVigna and Pollet (2009), we include size (*LnSize*), book-to-market ratio (*LnBM*), leverage (*Leverage*), earnings persistence (*Persistence*), earnings volatility (*EarningsVol*), and the calendar date difference between quarter q's earnings announcement date and quarter q-4's earnings announcement date (*Lag*). Considering that advance receipts may be related to operating cash flows, we control the growth of operating cash flows, *Decile*  $\Delta CFO$ , in a manner similar to that for *Decile*  $\Delta Sales_{i,q}$  and *Decile*  $\Delta Earnings_{i,q}$ . To distinguish the long-run pricing effect of advance receipts from the accrual anomaly (Sloan, 1996), we also control for working capital accruals, *WcAcc*. All control variables are winsorised at the 1st and 99th percentiles on a quarterly basis to reduce the impact of outliers.

<sup>&</sup>lt;sup>5</sup>Assuming stock *i* in year *q* is assigned to the x-th decile, where x is the decile rank ranging from 1 to 10, then Decile  $\Delta AdvRpt_{i,t}$  is computed as Decile  $\Delta AdvRpt_{i,t} = -1/2 + (x-1)/10$ .

Both Models (1) and (2) include industry fixed effects. We divide all A-share listed companies into 20 industries according to the 2012 CSRC industry classification standard, with the manufacturing industry subdivided into the second level. Models (1) and (2) are estimated using the Fama and MacBeth (1973) procedure with Newey–West adjusted standard errors (4 lags). Detailed descriptions of all variables are provided in Table 1.

### 4. Empirical analysis

### 4.1. Descriptive statistics

As depicted in Figure 1,<sup>6</sup> the proportion of advance receipts relative to annual sales is approximately 10%. The earnings expected to be generated by advance receipts, which are estimated by multiplying advance receipts with the net profit margin, account for approximately 8% of annual earnings. Both indicators highlight the economic significance of advance receipts, and they are generally stable during the sample period without large fluctuations.

Figure 2 reports the proportion of advance receipts relative to sales/earnings by industry. Relative to other industries, the real estate sector displays a substantially higher percentage of advance revenues, which is consistent with its widespread use of off-plan properties. Sizeable variations in advance receipts also exist across other industries, hence underscoring the importance of the within-industry standardisation of  $\Delta AdvRpt_{i,q}$  and  $\Delta AdvRptNi_{i,q}$ .

Table 2 reports the descriptive statistics for the main variables. The statistics for  $\Delta AdvRpt$ ,  $\Delta AdvRptNi$ ,  $\Delta Sales$ , and  $\Delta Earnings$  are obtained from their raw distributions before decile ranking transformation and standardisation. The sample distribution exhibits large variations in advance receipts, as the mean of  $\Delta AdvRpt$  is 0.0069, and the standard deviation is 0.046, and  $\Delta AdvRpt$  increases from – 0.0292 (the 5th percentile) to 0.0622 (the 95th percentile). The statistical distributions of the other variables are generally in line with our expectations.

Table 3 displays the correlation matrix between advance receipts and income statement performance indicators and shows no significant correlation between advance receipts and income-statement performance indicators, such as sales and earnings, in either the raw variable pairs ( $\Delta UnRev$  and  $\Delta Earnings$ ,  $\Delta UnRevNi$  and  $\Delta Earnings$ ) or the decile ranking transformed variable pairs ( $Decile \Delta AdvRpt$  and  $Decile \Delta Sales$ ,  $Decile \Delta AdvRptNi$  and  $Decile \Delta Earnings$ ). The low correlation suggests that investors exclusively concentrating on explicit income statement performance indicators are likely to provide biased estimates of firms' future prospects.

# 4.2. Advance receipts and future performance

Figure 3 displays the regression coefficients of *Decile*  $\Delta AdvRpt_{i,q}$  on future *Decile*  $\Delta Sales_{i,q+j}$  (blue) and that of *Decile*  $\Delta AdvRptNi_{i,q}$  on future *Decile*  $\Delta Earnings_{i,q+j}$  (red) for the upcoming 1 to 4 quarters. The findings suggest that both *Decile*  $\Delta AdvRpt_{i,q}$  and *Decile*  $\Delta AdvRptNi_{i,q}$ 

<sup>&</sup>lt;sup>6</sup>The use of annual instead of quarterly numbers is intended to eliminate the operating seasonality of listed companies.

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# Table 1. Variable definitions.

Variable	Definition
Decile ΔUnRev <sub>i,q</sub>	$\Delta AdvRpt_{i,q}$ is the increment of the advance receipts of firm <i>i</i> in quarter <i>q</i> relative to that in <i>q</i> -4 divided by the market capitalisation of firm <i>i</i> at the end of quarter <i>q</i> . In each quarter and industry, $\Delta AdvRpt_{i,q}$ is first converted into decile rankings and then standardised to be in [-1/2, 1/2].
Decile $\Delta$ UnRevNi <sub>i,q</sub>	$\Delta AdvRptNi_{i,q}$ is the increment of the advance receipts of firm <i>i</i> in quarter <i>q</i> relative to that in <i>q</i> -4 divided by the market capitalisation of firm <i>i</i> at the end of quarter <i>q</i> . In each quarter and industry, $\Delta AdvRptNi_{i,q}$ is first converted into decile rankings and then standardised to be in [-1/2, 1/2].
Decile $\Delta Sales_{i,q}$	$\Delta Sales_{i,q}$ is the increment of the sales of firm <i>i</i> in quarter <i>q</i> relative to that in <i>q</i> -4 divided by the market capitalisation of firm <i>i</i> at the end of quarter <i>q</i> . In each quarter and industry, $\Delta \Delta Sales_{i,q}$ is first converted into decile rankings and then standardised to be in [-1/2, 1/2].
Decile ∆Earnings <sub>i,q</sub>	$\Delta Earnings_{i,q}$ is the increment of the earnings of firm <i>i</i> in quarter <i>q</i> relative to that in <i>q</i> -4 divided by the market capitalisation of firm <i>i</i> at the end of quarter <i>q</i> . In each quarter and industry, $\Delta Earnings_{i,q}$ is first converted into decile rankings and then standardised to be in [-1/2, 1/2].
Decile $\Delta CFO_{i,q}$	$\Delta CFO_{i,q}$ is the increment of the operating cash flows in quarter $q$ relative to that in $q$ -4 divided by the market capitalisation of firm $i$ at the end of quarter $q$ . In each quarter and industry, $\Delta CFO_{i,q}$ is first converted into decile rankings and then standardised to be in $[-1/2, 1/2]$ .
Decile Forecasted $\Delta Sales_{i,y+j}$	Forecasted $\Delta$ Sales is the consensus 1 (or 2) -year-ahead analyst sales forecast of firm <i>i</i> minus sales in the current year divided by the market capitalisation at the end of the year. In each year and industry, Forecasted $\Delta$ Sales is first converted into decile rankings and then standardised to be in $[-1/2, 1/2]$ .
Decile Forecasted ∆Earnings <sub>i,y+j</sub>	Forecasted $\Delta$ Earnings is the consensus 1 (or 2) -year ahead analyst earnings forecast of firm <i>i</i> minus the earnings of the current year divided by the market capitalisation at the end of the year. In each year and industry, Forecasted $\Delta$ Earnings is first converted into decile rankings and then standardised to be in [-1/2, 1/2].
Retail_ABSI[-1, 1] <sub>i,q</sub>	Retail investors' cumulative daily abnormal order flow imbalance during the financial report window [-1, 1]. The daily order flow imbalance is the difference between the buying and selling volumes divided by the average trading volume during [-130, -10) and (10, 130]. The daily abnormal order flow imbalance is then obtained as the difference between the daily order flow imbalance and the average daily order flow imbalance during [-130, -10) and (10, 130]. Trades in amounts less than RMB 100,000 are categorised as trades initiated by retail investors.
Institutional_ABSI[-1, 1] <sub>i,q</sub>	Institutional investors' cumulative daily abnormal order flow imbalance during the financial report window [-1, 1]. The daily order flow imbalance is the difference between the buying and selling volumes divided by the average trading volume during [-130, -10) and (10, 130]. The daily abnormal order flow imbalance is then obtained as the difference between the daily order flow imbalance and the average daily order flow imbalance during [-130, -10) and (10, 130]. Trades in amount larger than RMB 200,000 are categorised as trades initiated by institutional investors.
$BHAR[t_1, t_2]_{i,q}$	Size-adjusted buy-and-hold abnormal returns to be in $[t_1, t_2]$ .
LnSize <sub>i,q</sub>	Natural logarithm of the market capitalisation of outstanding stocks.
LnBM <sub>i,q</sub>	Natural logarithm of the book-to-market ratio.
Leverage <sub>i,q</sub>	Total liabilities divided by total assets.
Persistence <sub>i,q</sub>	Coefficient of regressing <i>Earnings</i> <sub><i>i,q</i></sub> on <i>Earnings</i> <sub><i>i,q-1</i></sub> over the past 16 quarters; a minimum of 8 observations are needed.
EarningsVol <sub>i,q</sub>	Standard deviation of <i>Earnings</i> divided by the market capitalisation at the end of quarter <i>q</i> . The estimation is executed over the past 16 quarters; a minimum of 8 observations are needed.

(Continued)

Variable	Definition
Lag <sub>i,q</sub>	Difference in calendar dates between quarter q's earnings announcement date and quarter q-4's earnings announcement date.
WcAcc <sub>i,q</sub>	Working capital accruals in quarter <i>q</i> divided by the market capitalisation at the end of quarter <i>q</i> . Working capital accruals are the increment in short-term operating assets (excluding cash) minus the increment in operating liabilities.
ForecastBias <sub>i,y</sub>	Actual earnings minus consensus earnings forecast of analysts (the median of earnings forecasts) divided by the market capitalisation at the end of year y.
LnCov <sub>i,y</sub>	Natural logarithm of the number of analysts who provide the y-year earnings forecasts for firm <i>i</i> .

Table 1. (Continued).

have effective forecasting abilities for future performance of no less than four quarters. Therefore, advance receipts can provide important performance information for investors.

Following Bentley et al. (2018), in the regression analysis, we assess the aggregated predictive power of *Decile*  $\Delta AdvRpt_{i,q}$  and *Decile*  $\Delta AdvRptNi_{i,q}$  on future performance for the upcoming years (q+1–q+4). As presented in Table 4, the subscript of the dependent variable represents the aggregated growth in sales (earnings) in q+1 to q+4 compared to sales (earnings) in q-3 to q.



**Figure 2.** Advance receipts relative to sales/earnings for different industries. This figure reports the average proportion of advance receipts relative to annual sales (blue) and the average proportion of earnings expected to be generated by advance receipts relative to annual earnings (red) in different industries.

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Variables	Mean	Std. Dev	P5	P25	P50	P75	P95
∆AdvRpt	0.0069	0.0459	-0.0292	-0.0016	0.0004	0.0058	0.0622
∆AdvRptNi	0.0005	0.0039	-0.0015	-0.0001	0.0000	0.0003	0.0035
∆Sales	0.0148	0.0747	-0.0712	-0.0043	0.0067	0.0274	0.1263
ΔEarnings	-0.0006	0.0260	-0.0201	-0.0026	0.0004	0.0031	0.0173
ΔCFO	0.0019	0.0512	-0.0688	-0.0114	0.0007	0.0141	0.0755
GPM	0.0181	0.6733	-0.3125	0.0113	0.0637	0.1464	0.3643
NPM	-0.7405	1.1034	-2.5076	-1.3391	-0.5543	0.1199	0.4647
BHAR[-1, 1]	-0.0011	0.0464	-0.0724	-0.0271	-0.0044	0.0207	0.083
BHAR[2, 10]	-0.0005	0.0695	-0.1009	-0.0396	-0.0074	0.0301	0.1244
BHAR[2, 30]	-0.0053	0.1242	-0.1819	-0.0733	-0.0169	0.0497	0.2135
BHAR[2, 60]	-0.0085	0.1725	-0.2466	-0.1083	-0.0279	0.0667	0.3004
BHAR[2, 120]	-0.0193	0.2604	-0.3645	-0.165	-0.0511	0.0863	0.4397
BHAR[2, 250]	-0.0555	0.4872	-0.695	-0.2762	-0.0944	0.1146	0.7257
LnSize	14.8686	1.2038	12.8675	14.0655	14.8698	15.6257	16.9331
LnBM	-1.2943	0.8079	-2.7495	-1.7811	-1.2133	-0.7221	-0.1047
Leverage	0.4576	0.27	0.1025	0.2732	0.4445	0.6098	0.8195
Persistence	0.0966	0.3753	-0.366	-0.0858	0.0418	0.2663	0.6386
EarningsVol	0.0143	0.0207	0.002	0.0043	0.0081	0.0157	0.0442
WcAcc	0.0010	0.0615	-0.0864	-0.0127	0.0026	0.0187	0.0818
Lag	1.0055	12.7933	-17.0000	-2.0000	0.0000	4.0000	22.0000
LnCov	1.4905	0.6771	0.6931	0.6931	1.3863	1.9459	2.7081

Table 2.	Descriptive	statistics.
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Regressions (1) and (2) in Table 4 show that  $Decile \Delta AdvRpt_{i,q}$  has a significant predictive ability on sales growth for the next four quarters, and it remains significant at the 1% level after controlling for concurrent sales growth  $Decile \Delta Sales_{i,q}$ . The results of regressions (3) and (4) document that the alternative measure of advance receipts,  $Decile \Delta AdvRptNi_{i,q}$ , significantly predicts aggregated future earnings growth, and this effect is independent of  $Decile \Delta Earnings_{i,q}$ .

The overall findings of Figure 3 and Table 4 conform to the notion that advance receipts are quasi-income recorded on the balance sheet. However, advance receipts gradually turn into 'formal operating performance' during subsequent accounting periods once the recognition conditions are satisfied. Therefore, we posit that smart investors should fully consider the impact of advanced receipts when evaluating the future profitability of a listed company.

Table 3. Correlation matrix of advance receipts and income statement performance measures.

	ΔAdvRpt	ΔSales		∆AdvRptNi	ΔEarnings
∆AdvRpt	1	0.2053***	∆AdvRptNi	1	0.1047***
∆Sales	0.1521***	1	<b>∆</b> Earnings	0.0157***	1
	Decile ∆AdvRpt	Decile ∆Sales		Decile ∆AdvRptNi	Decile $\Delta Earnings$
Decile ∆AdvRpt	1	0.1916***	Decile ∆AdvRptNi	1	0.1003***
Decile $\Delta$ Sales	0.1917***	1	Decile $\Delta Earnings$	0.1002***	1

This table reports the correlations between variables, with the Pearson correlation coefficients on the lower diagonal and the Spearman rank correlation coefficients on the top diagonal. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.



 $\Box Decile \,\Delta A dv R pt \quad \Box Decile \,\Delta A dv R pt Ni$ 

**Figure 3.** The predictive ability of advance receipts on future performance. This figure reports the regression coefficients and corresponding 95% confidence intervals of the capacity of *Decile*  $\Delta AdvRpt_{i,q}$  (*Decile*  $\Delta AdvRptNi_{i,q}$ ) to forecast the upcoming *j*-quarter's (*Qj*) sales (earnings) growth while controlling for *Decile*  $\Delta Sales_{i,q}$ .

# 4.3. Posts about advance receipts on the EastMoney investor discussion forum

Prior findings have demonstrated the informativeness of advance receipts. In this section, to examine whether investors pay attention to advance receipts, we first examine their posts on the EastMoney Discussion Forum during the [-1,1] financial report disclosure window.

	(1)	(2)	(3)	(4)
	Decile ΔSa	$lles_{i,q+1-q+4}$	Decile ∆Earr	nings <sub>i,q+1-q+4</sub>
Decile ∆AdvRpt <sub>i.a</sub>	0.2255***	0.1735***		
	(28.55)	(26.20)		
Decile ∆Sales <sub>i,q</sub>		0.2719***		
		(17.72)		
Decile ∆AdvRptNi <sub>i,q</sub>			0.1133***	0.0973***
			(17.77)	(16.72)
Decile ∆Earnings <sub>i,q</sub>				0.1551***
				(12.32)
Industry	Yes	Yes	Yes	Yes
Quarters	64	64	64	64
Ave-Adj-R <sup>2</sup>	0.053	0.130	0.019	0.051
Observations	127022	127022	114864	110736

Table 4. The predictive ability of advance receipts on future performance.

This table reports the results of the Fama – MacBeth cross-sectional regressions. The numbers in parentheses are Newey– West t-statistics with standard errors adjusted by 4 lags. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

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Figure 4. Investors' posts discussing sales, earnings, and advance receipts. This figure reports the proportion of posts related to sales, earnings, and advance receipts as a percentage of the total number of posts in the [-1,1] financial report disclosure window. The blue bar represents the average proportion for all listed companies, and the red bar represents the average proportion for top decile firms with the highest ratio of advance receipts relative to sales.

We collect data on investors' posts on the EastMoney Discussion Forum between 2008 and 2019 from the CnOpenData database. As illustrated in Figure 4, in the financial report disclosure window, only 0.11% of the posts are related to advance receipts, while 7.45% and 18.15% discuss sales and earnings, respectively. Even among the top decile of firms with the highest proportion of advance receipts relative to sales, the stark contrast remains. Advance receipts are discussed in only 0.26% of the posts; however, sales and earnings are discussed in 6.90% and 16.16% of posts, respectively. The results of Figure 4 provide preliminary evidence that investors ignore the performance information reflected in advance receipts, probably due to habitual thinking about financial reports.

# 4.4. The short-term price impact of advance receipts around the financial report release date

Table 5 reports the market reaction to advance receipts around financial report release dates. In regressions (1) and (4), the coefficients of Decile  $\Delta AdvRpt$  and Decile  $\Delta AdvRptNi$ are significantly positive at the 1% level in the univariate tests. After controlling for income statement performance information and additional firm characteristics that influence stock returns, the statistical significance of *Decile*  $\Delta A dv R pt$  and *Decile*  $\Delta A dv R pt N i$  stays at the 1% level, although the regression coefficients slightly decrease from that of the

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	(1)	(2)	(3)	(4)	(5)	(6)
			BHAR[	-1, 1]		
Decile ∆AdvRpt <sub>i,q</sub>	0.0035***	0.0015***	0.0015**			
	(5.05)	(2.76)	(2.46)			
Decile ∆Sales <sub>i,q</sub>		0.0104***	0.0102***			
		(8.62)	(8.22)			
Decile ∆AdvRptNi <sub>i,q</sub>				0.0050***	0.0028***	0.0027***
				(8.00)	(5.10)	(4.82)
Decile ∆Earnings <sub>i,q</sub>					0.0212***	0.0218***
					(12.46)	(12.53)
Decile $\Delta CFO_{i,q}$			0.0039***			0.0025***
			(6.67)			(3.83)
LnSize			0.0002			-0.0000
			(0.52)			(-0.14)
LnBM			0.0004			0.0019***
			(0.66)			(2.78)
Leverage			-0.0041**			-0.0012
			(-2.62)			(-0.88)
Persistence			0.0019***			0.0016**
			(3.00)			(2.49)
EarningsVol			-0.0279***			-0.0573***
			(-2.76)			(-3.55)
WcAcc			0.0056**			0.0010
			(2.32)			(0.29)
Lag			-0.0000**			0.0000
			(-2.09)			(0.26)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Quarters	64	64	64	64	64	64
Ave-Adj-R <sup>2</sup>	0.024	0.033	0.043	0.027	0.058	0.069
Observations	107912	107912	107912	98404	98404	98404

Table 5. The short-term price impact of ad	vance receipts around the fina	ancial report release date.
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This table reports the results of the Fama – MacBeth cross-sectional regressions. The numbers in parentheses are Newey– West t-statistics with standard errors adjusted by 4 lags. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

univariate tests. These findings indicate that on the financial information release date, stock prices at least partially reflect the information content of advance receipts.

As we converted *Decile X* (*X* represents  $\Delta AdvRpt$ ,  $\Delta AdvRptNi$ ,  $\Delta Sales$ , and  $\Delta Earnings$ ) into decile rankings ranging from – 0.5 to 0.5, the coefficients of *Decile X* estimate the arbitrage returns of buying the top *Decile X* and short-selling the bottom *Decile X* when controlling for other factors. Therefore, the coefficient of *Decile \Delta Sales 0.0102* in regression (3) and that of *Decile \Delta Earnings 0.0218* in regression (6) indicates 3-day-arbitrage returns of 1.02% and 2.18%, respectively. However, the arbitrage trading returns on *Decile \Delta AdvRpt* in regression (3) and *Decile \Delta AdvRpt* in regression (6) are only 0.15% and 0.27%, respectively. The substantially smaller coefficients of *Decile \Delta AdvRpt* and *Decile \Delta AdvRptNi* are consistent with the few advance receipts related to posts documented in Figure 4. As a result, our findings in Table 5 suggest that the market is unlikely to react fully in the short run to the performance information reflected in advance receipts.

# **4.5.** Advance receipts and investors' trading behaviours around the financial report release date

Following Bhattacharya (2001) and Battalio and Mendenhall (2005), we look at investors' trading behaviours around the release of financial reports to further investigate whether investors discard the information content of advance receipts.

We construct abnormal buy and sell order flow imbalance (*ABSI*) in accordance with Kaniel et al. (2012). We first obtain the buying and selling trading volumes on each trading day (represented by *BuyVol* and *SellVol*) and then calculate the order flow imbalance of trading day *d* (*BSI*[*d*]) as (*BuyVol*[*d*] - *SellVol*[*d*])/*TVOL*, where *TVOL* is the average daily trading volume during [-130-10) and (10, 130]. The abnormal buy and sell order flow imbalance *ABSI* on trading day *d* is defined as *BSI*[*d*] - *MeanBSI*, where *MeanBSI* represents the average daily *BSI* for the 240 trading days before and after the financial report announcement date ([-130, -10) and (10, 130]). Finally, we cumulate *ABSI* over [-1, 1]. We employ *Retail\_ABSI*<sub>*i*,*q*</sub> and *Institutional\_ABSI*<sub>*i*,*q*</sub> as the dependent variables to study the trading behaviours of retail and institutional investors, respectively. Following Lee (1992), we use trading size to distinguish whether a trade is initiated by a retail or an institutional investor. Specifically, we classify transactions less than RMB 100,000 as trades initiated by institutional investors.

Table 6 reports the corresponding results. We find that neither retail investors (regressions (1) and (2)) nor institutional investors (regressions (3) and (4)) trade stocks according to  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ), as the coefficients for *Decile*  $\Delta AdvRpt$  and *Decile*  $\Delta AdvRptNi$  are not significant. However, the regression coefficients of *Decile*  $\Delta Sales$  and *Decile*  $\Delta Earnings$  are significant and positive, indicating that investors' trading direction is considerably influenced by sales and earnings growth. The findings in Table 3 coincide with the limited number of advance receipt-related posts documented in Figure 3 and the insubstantial short-term price impact of *Decile*  $\Delta AdvRpt$  and *Decile*  $\Delta AdvRptNi$  documented in Table 5. These results further illustrate that investors pay less attention to advance receipts than explicit performance indicators, such as sales and earnings. In addition, institutional investors, who possess higher professional skills than those of retail investors, may also pay insufficient attention to the performance information in advance receipts.

# **4.6.** The long-term price impact of advance receipts after the announcement of the financial report

In this section, we examine the long-term price impact of advance receipts after the release of financial reports. Figure 5 depicts the *BHAR* from the second trading day following the announcement of financial reports to one year later (250 trading days). Panels A and B provide the stock price patterns of the *Top* (*Bottom*)  $\Delta AdvRpt$  *Decile* and the *Top* (*Bottom*)  $\Delta AdvRptNi$  *Decile* portfolios, respectively, with each node representing 10 trading days. It is evident that firms exhibiting high growth in advance receipts (*Top Decile*) display positive excess returns in the following year, whereas those with low growth in advance receipts (*Bottom Decile*) continue to exhibit negative excess returns in the following year. After 250 trading days, the disparity between the two extreme portfolios reaches 7% to 8%, substantially larger than the corresponding 0.35% and 0.50% during the [-1, 1] financial report release window estimated in

	(1)	(2)	(3)	(4)
	Retail_AB	<i>SI</i> [-1, 1] <sub>i,q</sub>	Institutional	_ABSI[-1, 1] <sub>i,q</sub>
Decile $\Delta AdvRpt_{i,q}$	-0.0004	· · · ·	-0.0022	
	(-1.26)		(-0.63)	
Decile ∆Sales <sub>i,q</sub>	0.0046***		0.0259**	
	(5.73)		(2.25)	
Decile ∆AdvRptNi <sub>i,q</sub>		0.0003		0.0010
		(0.67)		(0.44)
Decile ∆Earnings <sub>i,q</sub>		0.0064***		0.0313***
		(5.46)		(3.87)
Decile ∆CFO <sub>i,q</sub>	0.0016***	0.0012**	0.0041	0.0026
	(3.17)	(2.41)	(1.30)	(0.96)
LnSize	0.0017***	0.0014**	0.0042*	0.0040*
	(2.82)	(2.52)	(1.77)	(1.81)
LnBM	0.0003	0.0007	-0.0007	0.0039*
	(0.52)	(1.14)	(-0.26)	(1.88)
Leverage	-0.0034***	-0.0026***	0.0010	0.0093
	(-3.55)	(-2.80)	(0.09)	(0.72)
Persistence	-0.0000	0.0004	-0.0005	-0.0029
	(-0.01)	(0.60)	(-0.15)	(-0.88)
EarningsVol	0.0414**	0.0288*	-0.0186	0.0822
	(2.53)	(1.92)	(-0.19)	(0.41)
WcAcc	0.0000	0.0000	0.0000	0.0000
	(0.97)	(0.79)	(0.85)	(1.00)
Lag	0.0000	0.0001*	0.0005	0.0005
	(1.43)	(1.76)	(1.44)	(1.37)
Industry	Yes	Yes	Yes	Yes
Quarters	64	64	64	64
Ave-Adj-R <sup>2</sup>	0.040	0.043	0.055	0.058
Observations	105187	96030	81448	74979

Table	6. A	dvance	receipts	and i	investors'	trading	behavi	ours	around	the	financi	al report	release	date.
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This table reports the results of the Fama – MacBeth cross-sectional regressions. The numbers in parentheses are Newey– West t-statistics with standard errors adjusted by 4 lags. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5. Additionally, neither extreme portfolio's *BHAR* appears to apparently reverse during the subsequent one year, which further supports the view that investors respond insufficiently to the information content of advance receipts and have a delayed assimilation of information over time.

Figure 5 provides univariate tests but does not consider other variables, such as sales and earnings growth, which could also affect stock returns after the publication of financial reports. To ensure that Figure 5 does not represent just a simple repetition of PEAD, the revenue surprise anomaly, and the accrual anomaly, we perform multivariate regressions on *BHAR* for several different windows in Table 7.

Using Columns (6) to (10) as examples, the regression coefficient for *Decile*  $\Delta Earnings$  is considerably positive, which is consistent with domestic studies by Yu and Wang (2006), Lu (2012), and Zhang et al. (2014) and suggests a significant PEAD effect in the A-share market. However, the regression coefficient for *Decile*  $\Delta AdvRptNi$  is still significantly positive in

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Panel A The long-term price impact of  $\triangle AdvRpt$ 



Panel B The long-term price impact of *AdvRptNi* 

Figure 5. Long-term price impact of information content in advance receipts. Panel A (B) depicts the BHAR from the second trading day after the announcement of financial reports to one year later (250 trading days) for two extreme portfolios, Decile  $\Delta A dv Rpt$  (Decile  $\Delta A dv Rpt Ni$ ) = 1 and Decile  $\Delta A dv Rpt$ (Decile  $\triangle AdvRptNi$ ) = 10.

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	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)
BHAR	[2, 10]	[2, 30]	[2, 60]	[2, 120]	[2, 250]	[2, 10]	[2, 30]	[2, 60]	[2, 120]	[2, 250]
Decile <b>AUnRev<sub>i,q</sub></b>	0.0024**	0.0063***	0.0123***	0.0240***	0.0486***					
	(2.29)	(3.31)	(3.84)	(5.51)	(4.18)					
Decile ΔSales <sub>i,q</sub>	0.0028***	0.0097***	0.0263***	0.0431***	0.0660***					
	(2.91)	(5.05)	(8.38)	(8.51)	(6.65)					
Decile ∆UnRevNi <sub>i,q</sub>						0.0026**	0.0086***	0.0172***	0.0324***	0.0656***
						(2.43)	(3.51)	(4.11)	(5.89)	(4.43)
Decile <u>A</u> Earnings <sub>i,q</sub>						0.0065***	0.0162***	0.0424***	0.0687***	0.0828***
						(5.33)	(4.73)	(8.18)	(7.93)	(5.20)
Decile ACFO <sub>i,q</sub>	0.0021*	0.0012	0.0068***	0.0124***	0.0266***	0.0017	0.0003	0.0050***	0.0084***	0.0198***
	(1.85)	(0.77)	(3.82)	(6.04)	(5.93)	(1.44)	(0.20)	(2.93)	(3.54)	(4.32)
LnSize	-0.0009*	-0.0001	0.0015	0.0056	0.0231**	-0.0008*	-0.0000	0.0012	0.0056	0.0241**
	(-1.89)	(-0.12)	(0.84)	(1.59)	(2.44)	(-1.70)	(-0.01)	(0.67)	(1.53)	(2.44)
LnBM	0.0027**	0.0046**	0.0033	0.0150**	0.0452**	0.0030**	0.0054**	0.0059*	0.0202***	0.0498**
	(2.07)	(2.06)	(1.11)	(2.32)	(2.13)	(2.26)	(2.30)	(1.96)	(2.93)	(2.27)
Leverage	0.0004	-0.0019	-0.0111	-0.0043	0.0212	0.0010	0.0011	-0.0016	0.0128	0.0423
	(0.17)	(-0.33)	(-1.24)	(-0.25)	(0.36)	(0.40)	(0.19)	(-0.17)	(0.75)	(0.79)
Persistence	-0.0019***	-0.0031	-0.0034	-0.0052*	-0.0111*	-0.0028***	-0.0051***	-0.0044	-0.0088***	-0.0166***
	(-2.84)	(-1.58)	(-1.32)	(-1.71)	(-1.87)	(-3.12)	(-2.73)	(-1.78)	(-3.29)	(-2.80)
EarningsVol	-0.0372	-0.1074	-0.0386	-0.0222	-0.0105	-0.0785**	-0.1518**	-0.0840	-0.1221	-0.1335
	(-1.25)	(-1.62)	(-0.46)	(-0.14)	(-0.03)	(-2.52)	(-2.25)	(-1.02)	(-0.82)	(-0.40)
WcAcc	-0.0030	-0.0040	0.0246*	0.0288	0.0528	-0.0040	-0.0071	0.0211	0.0247	0.0213
	(-0.43)	(-0.39)	(1.87)	(1.41)	(1.35)	(-0.68)	(-0.71)	(1.55)	(1.05)	(0.51)
Lag	-0.0000	-0.0001	-0.0002***	-0.0002	-0.0002	-0.0000	0.0000	-0.0001	0.0001	-0.0001
	(-0.10)	(-0.89)	(-2.88)	(-0.98)	(-0.60)	(-0.57)	(0.24)	(-0.80)	(0.32)	(-0.34)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarters	64	64	64	64	64	64	64	64	64	64
Ave-Adj-R <sup>2</sup>	0.061	0.077	0.092	0.099	0.104	0.066	0.082	0.103	0.110	0.111
Observations	107912	107912	107912	107912	107912	98404	98404	98404	98404	98404
This table reports the re indicate statistical sign	sults of the Fam nificance at the	a – MacBeth cros 10%, 5%, and 1%	s-sectional regres 6 levels. respectiv	isions. The numb elv.	oers in parenthes	es are Newey–W	est t-statistics with	standard errors	adjusted by 4 lag	s. *, **, and ***

ent of the financial renort È 2 **I**OUUE Table 7. The long-term price impact of advance receipts after the CHINA JOURNAL OF ACCOUNTING STUDIES 😔 19

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various windows, including [2, 10], [2, 30], [2, 60], [2, 120], and [2, 250], after controlling for *Decile*  $\Delta Earnings$ . This finding suggests that the long-term impact of advance receipts on stock returns is a novel discovery different from PEAD. In addition, the regression coefficient for *Decile*  $\Delta Sales$  is strongly positive in Columns (1) to (5), suggesting that the revenue surprise anomaly (Jegadeesh & Livnat, 2006) also holds in the A-share market. Nevertheless, even after controlling for *Decile*  $\Delta Sales$ , *Decile*  $\Delta AdvRpt$  still exhibits substantial long-term price effects, indicating that we document a new anomaly.

Furthermore, the regression coefficients for *Decile*  $\Delta AdvRpt$  and *Decile*  $\Delta AdvRptNi$  monotonically increase as the testing window lengthens. As we can see from Columns (6) to (10), the estimated arbitrage return generated by the top and bottom *Decile*  $\Delta AdvRptNi$  in [2, 10] is essentially comparable to *BHAR*[-1, 1] in Table 5. However, one year later, the cumulative excess return *BHAR*[2, 250] is 20 times greater than the short-term market reaction *BHAR*[-1, 1].

# 4.7. Advance receipts and future earnings announcements

Numerous works in the behavioural finance literature document that anomaly returns are substantially stronger on earnings announcement days because of corrections in beliefs. For instance, Bernad and Thomas (1990) find that the excess returns associated with PEAD are mainly concentrated in the next earnings announcement window. Sloan (1996) discovers that a considerable part of anomalous accrual returns are earned on future earnings announcements. La Porta et al. (1997) examine stock returns around earnings announcements for value and glamour stocks and find that the return difference of these stocks is mainly attributable to earnings surprises. In an extensive study covering 97 anomalies, Engelberg et al. (2018) find that the magnitude of market anomalies on earnings announcement days is 6 times greater than that on typical trading days. Building on prior research, we seek further evidence of investors' underestimations of the performance information reflected in advance receipts by observing stock returns around future earnings announcements.

The results in Figure 3 and Table 4 show that firms are likely to achieve significant growth in sales and earnings during the following quarters when they achieve high growth in  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ). However, if investors fail to be attentive to the information content of advanced receipts, they might systematically underestimate a firm's future profitability, and actual earnings in subsequent quarters are very likely to exceed their ex ante expectations. In particular, future earnings announcement days are predicted to have positive stock returns.

Figure 6 reports the coefficients of *Decile*  $\Delta AdvRpt$  and *Decile*  $\Delta AdvRptNi$  from regressions on future earnings announcement<sup>7</sup> returns *BHAR* [-1, 1] during the next 4 quarters. The findings demonstrate a positive link between the current quarter *Decile*  $\Delta AdvRpt$  and the upcoming *Q1*, *Q2* and *Q3* earnings announcement returns. *Decile*  $\Delta AdvRptNi$  of the current quarter has significant predictive ability for the earnings announcement returns in the next 4 quarters. These findings closely parallel the fact that investors overlook the

<sup>&</sup>lt;sup>7</sup>In Figure 6 and Table 8, we define the earnings announcement date as the earlier date between the flash report and financial report disclosure dates. Adopting the financial report disclosure date as the earnings announcement date does not change the results in Figure 6 and Table 8.



 $\Box Decile \,\Delta AdvRpt \quad \Box Decile \,\Delta AdvRptNi$ 

**Figure 6.** Advanced receipts and future earnings announcement returns. This figure reports the regression coefficients and the corresponding 95% confidence intervals of *Decile*  $\Delta AdvRpt_{i,q}$  (*Decile*  $\Delta AdvRpt_{i,q}$ ) on the upcoming *j* quarter's (*Qj*) earnings announcement returns *BHAR* [-1, 1]<sub>*i*,*q*+*j*</sub> after controlling for *Decile*  $\Delta Sales_{i,q}$  (*Decile*  $\Delta Earnings_{i,q}$ ) and other control variables.

performance information reflected in advance receipts and underestimate firms' future profitability.

In Table 8, we also consider the overall impact of *Decile*  $\Delta AdvRpt$  and *Decile* ΔAdvRptNi on the market reactions of earnings announcements during the subsequent 4 quarters. The dependent variable BHAR[-1, 1]<sub>q+1-q+4</sub> represents the combined excess earnings returns throughout the next four quarters of the earnings announcement window. The results show that in the next four earnings announcement windows, Decile  $\Delta AdvRpt$  and Decile  $\Delta AdvRptNi$  earn excess returns of 0.89% and 1.1%, respectively. Importantly, the excess returns generated by *Decile*  $\Delta A dv Rpt$ during the 12 trading days are close to 1/5 of BHAR [2, 250] (4.86%) estimated in Table 6, while the excess returns generated by *Decile*  $\Delta A dv Rpt Ni$  during the same 12 trading days are close to 1/6 of BHAR [2, 250] (0.656%). This finding is consistent with the assertion made in the cited literature (Bernad & Thomas, 1990; Engelberg et al., 2018; La Porta et al., 1997; Sloan, 1996), according to which the impact of biased beliefs on stock returns is concentrated around earnings announcements. Therefore, the results from future earnings announcements further support our view that investors undervalue the performance information reflected in advance receipts.

#### 4.8. Calendar-time portfolio tests

We tend to interpret the above findings as an anomaly where the performance information reflected in advance receipts is sluggishly integrated into stock prices. We attribute

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	(1)	(2)	(3)	(4)	(5)	(6)
			BHAR[-1,	1] <sub>i,q+1-q+4</sub>		
Decile ∆AdvRpt <sub>i.a</sub>	0.0098***	0.0085***	0.0089***			
	(6.78)	(6.83)	(6.18)			
Decile ∆Sales <sub>i,a</sub>		0.0071***	0.0073***			
		(3.92)	(3.82)			
Decile ∆AdvRptNi <sub>i,q</sub>				0.0110***	0.0106***	0.0110***
				(8.22)	(8.29)	(7.60)
Decile ∆Earnings <sub>i,q</sub>					0.0044*	0.0055**
					(1.81)	(2.46)
Decile $\Delta CFO_{i,q}$			0.0029***			0.0023**
			(2.72)			(2.18)
LnSize			0.0009			0.0007
			(1.07)			(0.85)
LnBM			0.0006			0.0012
			(0.37)			(0.69)
Leverage			-0.0153***			-0.0107**
			(-2.90)			(-2.35)
Persistence			0.0022			0.0035
			(0.92)			(1.41)
EarningsVol			-0.1540***			-0.1010**
			(-3.21)			(-2.37)
WcAcc			-0.0022			-0.0084
			(-0.29)			(-0.91)
Lag			-0.0000			0.0000
			(-0.11)			(0.35)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Quarters	64	64	64	64	64	64
Ave-Adj-R <sup>2</sup>	0.027	0.029	0.039	0.029	0.031	0.040
Observations	105789	105789	105789	96697	96697	96697

Table 8. A	Advance i	receipts	and	stock	returns	around	future	earnings	announcements.

This table reports the results of the Fama – MacBeth cross-sectional regressions. The numbers in parentheses are Newey– West t-statistics with standard errors adjusted by 4 lags. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

the reason for this anomaly to investors' habitual thinking regarding financial statements and their resulting overlooking of advance receipts. However, classical asset pricing theories posit that risk is the underlying driving force for the cross-sectional difference in stock returns.

To eliminate risk-based explanations and explore the possibility of trading on advance receipts to generate abnormal returns, we construct a calendar-month trading strategy in line with the standard asset pricing approach and test whether this strategy could earn significant risk-adjusted alphas.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Decile	Raw	CAPM	FF-3	FF-5	Raw	CAPM	FF-3	FF-5
∆AdvRpt		Equal W	/eighted			Value W	/eighted	
L	0.0131*	0.0046	-0.0019	-0.0009	0.0079	-0.0003	-0.0042**	-0.0024
	(1.73)	(1.27)	(-1.19)	(-0.55)	(1.15)	(-0.11)	(-2.02)	(-1.11)
Н	0.0189**	0.0105***	0.0048***	0.0050***	0.0153**	0.0072***	0.0044**	0.0057**
	(2.57)	(3.13)	(3.10)	(2.91)	(2.28)	(2.95)	(2.00)	(2.53)
H-L	0.0058***	0.0059***	0.0067***	0.0059***	0.0074***	0.0075***	0.0085***	0.0081***
	(5.49)	(5.67)	(6.96)	(5.64)	(4.31)	(4.36)	(5.23)	(4.48)
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Decile	Raw	CAPM	FF-3	FF-5	Raw	CAPM	FF-3	FF-5
∆AdvRptNi		Equal W	/eighted			Value W	/eighted	
L	0.0123*	0.0039	-0.0018	-0.0020	0.0088	0.0006	-0.0021	-0.0013
	(1.68)	(1.18)	(-1.30)	(-1.30)	(1.30)	(0.23)	(-0.98)	(-0.57)
Н	0.0196***	0.0113***	0.0065***	0.0054***	0.0180***	0.0100***	0.0086***	0.0078***
	(2.75)	(3.65)	(4.13)	(3.05)	(2.75)	(4.59)	(4.44)	(3.71)
H-L	0.0073***	0.0075***	0.0083***	0.0073***	0.0092***	0.0094***	0.0107***	0.0091***
	(5.96)	(6.17)	(7.15)	(6.27)	(4.06)	(4.23)	(4.79)	(3.78)

Table 9. Calendar-time portfolio tests.

This table reports the alphas of time-series regressions. The numbers in parentheses are t-statistics with White heteroskedasticity adjusted standard errors. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

At the beginning of each month and in each industry, we sort all stocks listed for more than 6 months into deciles according to  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ) using the most recent financial information available to investors,<sup>8</sup> and the portfolios are rebalanced every month. Portfolio *L* comprises stocks belonging to the lowest  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ) decile, and portfolio *H* comprises stocks belonging to the highest  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ) decile. Table 9 presents the monthly risk-adjusted abnormal returns of portfolio *L*, portfolio *H*, and the zero-investment arbitrage portfolio (*H-L*). As Table 9 shows, the monthly alphas of the *H-L* portfolio range from 0.5% to 1% and survive the CAPM, the Fama and French (1993) 3-factor and the Fama and French (2015) 5-factor risk adjustments. Our findings are also robust for both equal- and value-weighted portfolios. Therefore, the long-term postannouncement stock returns associated with advance receipts could not be explained by common risk factors.

To further rule out risk-based explanations, we also graph in Figure 7 the yearly returns of the L/S portfolio. The yearly return is computed as if the investors, at the beginning of May of each year, provide 1 dollar to go long on the top decile and use it as collateral to

<sup>&</sup>lt;sup>8</sup>For example, if the current month is May, although some listed companies simultaneously disclosed their last year's annual reports and their 1<sup>st</sup> quarter reports in April, the timeliest financial report for investors in May is the 1<sup>st</sup> quarter report and not the last year's annual report. If the current month is April, for firms that have already disclosed their last year's annual reports, the timeliest financial statement is the last year's annual report. However, for firms that have not yet disclosed their last year's annual reports, the timeliest financial report is the 3<sup>rd</sup> quarter report for the last year. We adopt this approach to avoid a forward-looking bias. In practice, considering that investors need time to collect financial information, we lag one more month if a firm discloses its financial report in the second half of the month. Specifically, if a firm releases the 1<sup>st</sup> quarter report on April 27th, we do not use the 1<sup>st</sup> quarter ΔAdvRpt or ΔAdvRptNi in portfolio constructions until June. Our results are unaffected by the use or lack thereof of the additional 1-month lag. For brevity, the results are unablated but are available on readers' request.

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Panel A L/S portfolio constructed on *AdvRpt* 



Figure 7. Annual return of the L/S portfolio across the sample period. This figures report the yearly returns (from the beginning of May to the end of April of the next year) of the L/S trading strategy constructed using *AAdvRpt* (Panel A) and *AAdvRptNi* (Panel B) from 2004 to 2019.

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short the bottom decile and roll the portfolio monthly using the funds collected from the last month until the end of April in the next year. If the higher (lower) returns of stocks with high (low)  $\Delta AdvRpt$  ( $\Delta AdvRptNi$ ) are out of the compensation for undertaking more (less) risks, then the L/S portfolio shall occasionally earn sizeable negative returns. However, using Panel B as an example, the average equal (valued) weighted L/S portfolio return is 8.08% (10.12%), and the L/S portfolio is profitable in almost every year during the sample period. Therefore, the persistent outperformance of the L/S portfolio is difficult to be explained by risk-based explanations.

### 5. Additional analysis

#### 5.1. Could limited attention explain the inefficient pricing of advance receipts?

We posit that the inefficient pricing of advance receipts is caused by investors' habitual thinking related to financial statements, which is why they overlook the likelihood that a particular balance sheet item could also contain important performance information. However, prior literature has typically attributed the inefficient pricing of financial information, such as sales (Jegadeesh & Livnat, 2006) or earnings (Hirshleifer et al., 2009; DellaVigna & Pollet, 2009, to investors' limited attention. We already have some evidence that shows that our findings are different from those resulting from limited attention, such as the limited effects of advance receipts on stock price and investor trading behaviours and the limited frequency of discussions of advance receipts on online message boards during the financial report release window relative to that of discussions of sales and earnings.

In this section, to further differentiate the alternative limited attention explanation, we clarify that investors disregard advance receipts due to their habitual thinking about financial statements, regardless of whether they are paying attention to a particular stock. Following Da et al. (2011) and Drake et al. (2012), we use the internet search volume of stock codes to measure investors' attention and test whether attention affects the impact of advance receipts on stock prices and investor trading behaviours on the days on which financial reports are released.

In line with Drake et al. (2012), we measure daily abnormal internet search volume as the difference between the search volume of trading day *t* and the average search volume of the 52 trading days surrounding day *t* (for the same day of the week 26 weeks before and 26 weeks after day *t*) divided by the averaged search volume on the 52 surrounding days. Abnormal search volume, *SrhVol*, is the sum of the logged daily abnormal internet search volume during the [-1, 1] financial report disclosure window. In each quarter, we split stocks into two groups based on the median of *SrhVol* and construct a dummy variable, *High-SrhVol*, which equals 1 if the abnormal search volume is above the median and 0 otherwise. We add the interaction term between *High-SrhVol* and *Decile*  $\Delta AdvRpt$  (*Decile*  $\Delta AdvRptNi$ ) into the regression model to evaluate the role of attention on the pricing impact and investor trading behaviours during the financial report release days.

The results are presented in Table 10. Due to the availability of data on internet search volume, the sample period for Table 10 is from 2012 to 2019. In Column (1), the coefficient of the interaction term *Decile*  $\Delta AdvRpt_q \times High SrhVol$  is not statistically significant. These results suggest that the level of attention that investors pay to stocks does not influence

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			(o) (	(6)	(10)	(11)	(12)
Decile $AddnRpt_{i,q}$ 0.0003         0.0009         0.0000         0.0001         0.11         0.0001		Retail_ABSI[-1, 1	[		Institutional_	ABS/[-1, 1]	
Image: display in the image is th	0.000	0.0001		-0.0000	0.0001		
Decile $\Delta AdvRpt_{iq} \times High-Srhlol$ 0.0010         -0.0001         -0.0005         -0.0001         -0.0005         -0.0005	(0.04)	(0.47)		(-0.03)	(0.42)		
(0.93)         (-0.07)         (-0.84)         (-1.1)           Decile $dSale_{i_3}$ (.0.0166***)         0.0080****         0.0046****         0.0036 $(5.79)$ (4.53)         (4.53)         (4.67)         (3.1)           Decile $dSale_{i_3} \times High-SrhVol$ 0.0054****         0.0013         0.0013         0.0013         0.0014****         0.001           Decile $dAdvRptNi_{i_3} \times High-SrhVol$ (4.18)         0.0013         0.0013         0.0018**         (1.9)           Decile $dAdvRptNi_{i_3} \times High-SrhVol$ (4.18)         0.0013         0.0018**         (1.9)           Decile $dEamings_{i_4} \times High-SrhVol$ (1.51)         (0.76)         (1.5)         (1.5)           Decile $dEamings_{i_4} \times High-SrhVol$ (1.51)         (0.76)         (0.018**         0.0013           High-SrhVol         0.0051***         0.0021         0.0013         (0.16)         (1.5)           Decile $dEamings_{i_4} \times High-SrhVol         (1.67)         (4.47)         (4.47)         (5.17)           High-SrhVol         0.0051***         0.00013         (0.0018         0.0011           High-SrhVol         0.0051***         0.0014***         0.0013         (7.71)           Decile dEamings_{i_4} + High-$	-0.0005	-0.008		-0.0005	-0.0008		
Decile $\Delta S d E_{i_d}$ 0.0106***         0.0004***         0.0004***         0.0004***           Decile $\Delta S d E_{i_d} \times H igh-SrhVol$ (4.53)         (4.53)         (4.57)         (3.1)           Decile $\Delta S d E_{i_d} \times H igh-SrhVol$ 0.0013         0.0013         (1.5)         (1.5)           Decile $\Delta d d V R P W i_{i_d} \times H igh-SrhVol$ (1.59)         (1.59)         (1.51)         (0.011)           Decile $\Delta d d V R P W i_{i_d} \times H igh-SrhVol$ 0.0013         0.0013         0.0013         (1.5)           Decile $\Delta d d V R P W i_{i_d} \times H igh-SrhVol$ 0.0013         0.0013         0.0013         (1.51)         (0.76)           Decile $\Delta E armings_{i_d} \times H igh-SrhVol$ 0.0051***         0.0046***         0.0011         (1.5)         (1.5)           Decile $\Delta E armings_{i_d} \times H igh-SrhVol$ 0.0051***         0.0046***         0.0013         (1.5)         (1.5)         (1.5)           High-SrhVol         0.0051***         0.0051***         0.0022***         0.0013         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5)         (1.5) <th>(-0.84)</th> <th>(-1.14)</th> <th></th> <th>(-0.74)</th> <th>(-1.06)</th> <th></th> <th></th>	(-0.84)	(-1.14)		(-0.74)	(-1.06)		
(5.79)         (4.53)         (4.53)         (4.57)         (3.1)           Decile $dSales_{iq} \times High-SrhVol$ 0.0054****         0.0013         0.0013**         0.001           Decile $dAdvRptMi_{iq} \times High-SrhVol$ (4.18)         0.0013         0.0018***         (1.9)           Decile $dAdvRptMi_{iq} \times High-SrhVol$ (1.59)         0.0013         0.0018***         (1.9)           Decile $dAdvRptMi_{iq} \times High-SrhVol$ 1.59)         0.0013         0.0011         (1.9)           Decile $dEarnings_{iq}$ 1.151)         0.0013         0.0011         (1.5)           Decile $dEarnings_{iq} \times High-SrhVol$ 0.0051***         0.0046***         0.0013         0.0018           Decile $dEarnings_{iq} \times High-SrhVol$ 0.0051***         0.0054***         0.0013         0.0018         0.001           High-SrhVol         0.0051***         0.0051***         0.0025***         0.0018         0.001           Lecle $\Delta CFO_q$ 0.0061***         0.0025***         0.0017****         0.0011           Leverage         0.0002         0.0023***         0.0012***         0.0012*****         0.0012           Leverage         0.0023***         0.0021****         0.0022*****         0.0022         0.002         0.0	0.0046***	0.0038***		0.0045***	0.0038***		
Decile $\Delta lale_{i_q} \times high-5\pihVal$ 0.0054***         0.0013         0.00118**         0.0013         0.0011         (1.9.)         0.001           Decile $\Delta ladvkptNl_{i_q} \times high-5\pihVal$ (4.18)         0.0021         0.0013         0.0018**         (1.9.)	(4.67)	(3.16)		(4.63)	(3.11)		
(4.18)         (4.18)         (1.59)         (2.12)         (1.9)		0.0015*			0.0015*		
Decile $\Delta Adv Rpt Mi_{i,q}$ 0.0013         0.0013         0.0013         0.0013           Decile $\Delta Adv Rpt Mi_{i,q} \times High-5rh Vol$ (1.59)         (2.12)         0.0011           Decile $\Delta Adv Rpt Mi_{i,q} \times High-5rh Vol$ (1.51)         (0.76)         0.0011           Decile $\Delta Earnings_{i,q} \times High-5rh Vol$ (1.51)         (0.76)         0.0013           Decile $\Delta Earnings_{i,q} \times High-5rh Vol$ (1.51)         (0.76)         0.0018***           Decile $\Delta Earnings_{i,q} \times High-5rh Vol$ 0.0046***         0.0048***         0.0018         0.00           High-5rh Vol         0.0051***         0.0051***         0.0046***         0.0018***         0.001           Decile $\Delta Ero_q$ 0.0051***         0.0025***         0.0022****         0.0013**         0.001           High-5rh Vol         0.0064***         0.0022***         0.0017***         0.0013**         0.0013***         0.0013***           Decile $\Delta CFO_q$ 0.0003***         0.0002****         0.0022****         0.0013***         0.0013***           Loss         0.0003***         0.0002****         0.00015**         0.0013***         0.0013***         0.0013***           Loss         0.0002****         0.0002****         0.0002****         0.0002**		(1.93)			(1.93)		
Decile $\Delta Adv Rpt Mi_{iq} \times High-5rh Vol$ (1.59)         (2.12)           Decile $\Delta Idv Rpt Mi_{iq} \times High-5rh Vol$ 0.0021         0.0011           Decile $\Delta Idv Rpt Mi_{iq} \times High-5rh Vol$ (1.51)         (0.76)           Decile $\Delta Idv Rpt Mi_{iq} \times High-5rh Vol$ 0.0199****         0.0148****           Decile $\Delta Idv Rpt Mi_{iq} \times High-5rh Vol$ 0.0199****         0.0148****           Decile $\Delta Idv Rpt Mi_{iq} \times High-5rh Vol$ 0.0051****         0.0148****         0.0018           Decile $\Delta Idv Rpt Mi Mi + 5rh Vol$ 0.0051****         0.0046****         0.0018         0.001           High-5rh Vol         0.0051***         0.0051****         0.0046****         0.0018         0.001           Decile $\Delta ICO_q$ 0.0051***         0.0051***         0.0012***         0.0017***         0.0011           Loss         0.0040***         0.0025***         0.0012**         0.0017**         0.0011           Loss         0.00023***         0.00012**         0.0017**         0.0011         0.0011           Loss         0.00023***         0.00012**         0.0012**         0.00012***         0.0011           Loss         0.0002***         0.00012**         0.00012***         0.0002         0.0011         0.001	013 0.0018**	0.0	03 0.0004			0.0004	0.0007**
Decile $\Delta AdvRptWi_{iq} \times High-SrhVol$ 0.0021         0.0011         0.0011           Decile $\Delta Earnings_{iq} \times High-SrhVol$ (1.51)         (0.76)           Decile $\Delta Earnings_{iq} \times High-SrhVol$ 0.0199****         0.0148****           Decile $\Delta Earnings_{iq} \times High-SrhVol$ 0.0199****         (0.75)           Decile $\Delta Earnings_{iq} \times High-SrhVol$ 0.0019****         (9.18)         (8.05)           Decile $\Delta Earnings_{iq} \times High-SrhVol$ 0.0051***         0.0046***         0.00148***         (9.000           High-SrhVol         0.0051***         0.0046***         0.0046***         0.0017***         0.001           Decile $\Delta CFO_q$ 0.0061***         0.0025***         0.0017***         0.0017***         0.001           Leverage         0.00023**         0.00023***         0.00023***         0.0017***         0.0017***         0.001           Leverage         0.0015*         0.0015*         0.0013***         0.0017***         0.001           Leverage         0.035**         0.0015*         0.0021***         0.0022         0.001         0.00           Leverage         0.0015*         0.0015*         0.0015*         0.0022         0.00         0.00         0.00         0.00         0.00	59) (2.12)	(1.0	(1.27) (1.27)			(1.32)	(2.17)
Decile $\Delta Earnings_{iq}$ (1.51)         (0.76)           Decile $\Delta Earnings_{iq} \times High-SrhVol$ 0.0199****         (9.18)         (8.05)           Decile $\Delta Earnings_{iq} \times High-SrhVol$ (9.18)         (8.05)         0.0048***           High-SrhVol         (7.71)         (7.71)         (7.71)           High-SrhVol         0.0051***         0.0046***         0.0017***         0.001           Decile $\Delta FrO_q$ 0.0051***         0.0046***         0.0017***         0.001           Decile $\Delta FrO_q$ 0.0040***         0.0025***         0.0017***         0.0017***         0.001           Decile $\Delta FrO_q$ 0.003**         0.0002***         0.0017***         0.0017***         0.001           Leverage         0.0003**         0.0003**         0.0002**         0.0017***         0.001         0.001           Leverage         0.0015*         0.0015*         0.0013***         0.0013***         0.001         0.002           Leverage         (-2.06)         (-2.09)         (-1.40)         (-1.45)         (-2.80)         (-2.80)         (-2.80)	021 0.0011	-0.0	005 -0.0006			-0.0005	-0.0009
Decile dEarnings <sub>ia</sub> 0.0199***         0.0148***           Decile dEarnings <sub>ia</sub> × High-SrhVol         (9.18)         (8.05)         0.0098****           Decile dEarnings <sub>ia</sub> × High-SrhVol         (9.18)         (8.05)         0.0098****           High-SrhVol         (7.71)         0.0046****         0.0018****         0.0018         0.00           High-SrhVol $(7.71)$ 0.0046****         0.0046****         0.0017***         0.001           Decile $\Delta CFO_q$ 0.0040***         0.0025***         0.0024***         0.0017***         0.001           Decile $\Delta CFO_q$ 0.0040***         0.0025***         0.0024***         0.0017***         0.0011           Loss         0.0023**         0.00023**         0.00023***         0.00023***         0.0012***         0.0013***         0.0011           Loss         0.00023**         0.00023**         0.00023**         0.00023***         0.0002         0.001         0.001           Leverage         0.0015*         0.0015*         0.0021         0.0022         0.002         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65)         (-0.65) <th< th=""><th>51) (0.76)</th><th>.0-)</th><th>82) (–1.03)</th><th></th><th></th><th>(-0.82)</th><th>(-1.59)</th></th<>	51) (0.76)	.0-)	82) (–1.03)			(-0.82)	(-1.59)
(9.18)         (8.05)           Decile $\Delta Earnings_{iq} \times High-5rhVol$ (7.71)           High-SrhVol         0.0098***           High-SrhVol         0.0051***         0.0046***         0.0018         0.00           High-SrhVol         0.0051***         0.0046***         0.0018         0.00           Decile $\Delta FrO_q$ 0.0051***         0.0046***         0.0017***         0.0017           Decile $\Delta FrO_q$ 0.0040***         0.0025***         0.0017***         0.0017           Decile $\Delta FrO_q$ 0.0040***         0.0025***         0.0017***         0.0017           Loss         0.0002***         0.0002***         0.0017***         0.0017           Leverage         0.0001**         0.0015*         0.0013***         0.0012           Leverage         0.035**         0.0021**         0.0022         0.0022         0.002           Leverage         (-2.06)         (-2.09)         (-1.40)         (-1.45)         (-2.80)         (-2.80)	99***    0.0148***	0.008	2*** 0.0074***			0.0073***	0.0054***
Decile $\Delta Earnings_{iq} \times High-5\pi Mol$ 0.0098***           High-SrhVol         0.0051***         0.00645***         0.0018         0.00           High-SrhVol         0.0051***         0.0045***         0.0018         0.00           Decile $\Delta ErO_q$ 0.0051***         0.0045***         0.0018         0.00           High-SrhVol         0.0045***         0.0045***         0.0018         0.001           Decile $\Delta FO_q$ 0.0040***         0.0025***         0.0017***         0.0017           Drecile $\Delta FFO_q$ 0.0040***         0.0025***         0.0013***         0.0013**         0.0013**           LnSize         0.00023**         0.00023**         0.00023**         0.00022         0.0013***         0.0013***         0.0013***         0.0013***         0.0013***         0.0013***         0.0013***         0.0013***         0.0012****         0.0012****         0.0012****         0.0012****         0.0012****         0.0012*****         0.0012*****         0.002******         0.002*****         0.002*******         0.002*******         0.002*******         0.002************         0.002******         0.002********         0.002*********         0.002**********         0.002***********         0.002**********************************	.18) (8.05)	(4.6	(4.60) (4.60)			(4.17)	(3.56)
(7.71)         (7.71)           High-SrhVol $0.0051^{***}$ $0.0046^{***}$ $0.0045^{***}$ $0.0018$ $0.001$ Decile $\Delta CFO_q$ $(4.50)$ $(4.47)$ $(4.33)$ $(4.14)$ $(1.56)$ $(1.5)$ Decile $\Delta CFO_q$ $0.0040^{***}$ $0.0025^{***}$ $0.0024^{***}$ $0.0017^{***}$ $0.001$ LnSize $0.0040^{***}$ $0.0022^{***}$ $0.0022^{***}$ $0.0017^{***}$ $0.001$ LnSize $0.0003^{**}$ $0.0002^{***}$ $0.0002^{****}$ $0.0013^{***}$ $0.0011^{***}$ $0.0011^{***}$ LnBM $0.0002^{***}$ $0.0002^{***}$ $0.0015^{**}$ $0.0012^{****}$ $0.0011^{****}$ $0.0011^{***}$	0.0098***		0.0016**				0.0046***
High-SrhVol         0.0051***         0.0046***         0.0045***         0.0018         0.00 $High$ -SrhVol         (4.50)         (4.47)         (4.33)         (4.14)         (1.56)         (1.51) $Decile \Delta CFO_q$ 0.0040***         0.0040***         0.0025***         0.00217***         0.0011 $Losile \Delta CFO_q$ 0.0040***         0.0040***         0.0022***         0.0017***         0.0011 $Losile \Delta CFO_q$ 0.0040***         0.0022***         0.0022***         0.0017***         0.0011 $Losile$ 0.121         (1.21)         (4.87)         (4.13)         (5.17)         (5.17) $Losile$ 0.0023**         0.00023**         0.00023**         0.0002         0.0013***         0.0013 $Losile$ 0.0013**         0.0002         0.0015*         (1.19)         (3.03)         (3.0 $LBM$ 0.0015*         0.0015*         0.0015*         0.0002         -0.0002         -0.0002         -0.0002 $Leverage$ 0.0320         0.0021         0.0021         -0.0023****         -0.002         -0.002         -0.002 $Leverage$ (-2.06)         (-1.40)         (-1.4	(1.7.1)		(2.40)				(4.13)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	46*** 0.0045*** 0.0018	0.0018 0.00	0.0015	0.0018	0.0018	0.0017	0.0016
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	.33) (4.14) (1.56)	(1.36) (1.3	(1.30)	(1.56)	(1.56)	(1.42)	(1.33)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	25*** 0.0024*** 0.0017***	0.0017*** 0.001	2*** 0.0012***	0.0018***	0.0018***	0.0014***	0.0013***
LnSize         0.0003**         0.0002         0.0002         0.0013***         0.0013           LnSize         0.114)         (2.12)         (1.27)         (1.19)         (3.03)         (3.0           LnBM         0.0002         0.0002         0.0015*         0.0002         -0.002         -0.002           LnBM         0.0015*         0.0015*         0.0002         -0.002         -0.002         -0.01           Leverage         0.355         (0.37)         (1.94)         (1.98)         (-0.65)         (-0.61)           Leverage         -0.0024***         -0.0044***         -0.0020         -0.0023****         -0.002           Leverage         (-2.66)         (-2.09)         (-1.40)         (-1.45)         (-2.80)         (-2.40)	.87) (4.83) (5.17)	(5.17) (3.4	(3.41)	(5.33)	(5.34)	(3.74)	(3.58)
(2.14)       (2.12)       (1.27)       (1.19)       (3.03)       (3.0.         LnBM       0.0002       0.0002       0.0015*       0.0002       -0.002         (0.35)       (0.37)       (1.94)       (1.98)       (-0.65)       (-0.6         Leverage       -0.0024***       -0.0024***       -0.0022       -0.002       (-0.022         Leverage       (-2.06)       (-2.09)       (-1.40)       (-1.45)       (-2.80)       (-2.4)	002 0.0002 0.0013***	0.0013*** 0.001	11** 0.0011**	0.0013***	0.0013***	0.0011***	0.0011**
LnBM         0.0002         0.0002         0.0015*         -0.0002         -0.0           (0.35)         (0.37)         (1.94)         (1.98)         (-0.65)         (-0.6           Leverage         -0.0023***         -0.0024***         -0.0020         -0.0023****         -0.002           Leverage         (-2.66)         (-2.09)         (-1.40)         (-1.45)         (-2.80)         (-2.4)	(3.03) (27) (3.03)	(3.04) (2.6	(1) (2.63)	(3.09)	(3.10)	(2.75)	(2.74)
(0.35) (0.37) (1.94) (1.98) (-0.65) (-0.6 Leverage -0.0043** -0.0044** -0.0020 -0.0021 -0.0023*** -0.002 (-2.06) (-2.09) (-1.40) (-1.45) (-2.80) (-2.8	015* 0.0015* -0.0002	-0.0002 0.00	0.0002 0002	-0.0002	-0.0002	0.0002	0.0003
Leverage –0.0043** –0.0044** –0.0020 –0.0021 –0.0023*** –0.002 (–2.06) (–2.09) (–1.40) (–1.45) (–2.80) (–2.8	94) (1.98) (-0.65)	(-0.63) (0.5	(0.52)	(-0.59)	(-0.57)	(0.49)	(0.56)
(-2.06) (-2.09) (-1.40) (-1.45) (-2.80) (-2.8	0020 -0.0021 -0.0023***	-0.0023*** -0.0	010 -0.0010	-0.0022**	-0.0023**	-0.0009	-0.0009
	.40) (-1.45) (-2.80)	(-2.81) (-1.	12) (–1.12)	(-2.70)	(-2.72)	(06.0–)	(96.0–)
Persistence 0.0014*** 0.0013** 0.0007 0.0006 0.0011* 0.001	007 0.0006 0.0011*	0.0011* 0.00	011 0.0011	0.0011**	0.0011**	0.0012*	0.0012

	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)	(11)	(12)
		BHAR[-	-1, 1]			Retail_AB.	S/[-1, 1]			Institutional_		
	(2.75)	(2.64)	(1.60)	(1.38)	(2.03)	(2.04)	(1.49)	(1.46)	(2.06)	(2.07)	(1.72)	(1.60)
EarningsVol	-0.0230	-0.0240	-0.0581*	-0.0572*	0.0224*	0.0225*	0.0135	0.0144	0.0228*	0.0229*	0.0129	0.0140
	(-1.32)	(-1.39)	(-1.99)	(-2.04)	(1.83)	(1.83)	(0.87)	(0.92)	(1.86)	(1.86)	(0.86)	(0.95)
WcAcc	0.0067*	0.0065*	0.0047	0.0049	-0.0030	-0.0032*	-0.0031	-0.0032	-0.0000	-0.0000	-0.0000	-0.0000
	(1.97)	(1.92)	(1.46)	(1.53)	(-1.69)	(-1.77)	(-1.55)	(-1.54)	(-0.63)	(-0.70)	(-0.80)	(-0.80)
Гад	-0.0001**	-0.0001*	-0.0000	-0.0000	0.0000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	(-2.05)	(-2.01)	(-0.38)	(-0.25)	(0.74)	(0.76)	(1.17)	(1.16)	(0.74)	(0.76)	(1.15)	(1.20)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarters	32	32	32	32	32	32	32	32	32	32	32	32
Ave-Adj-R <sup>2</sup>	0.042	0.044	0.062	0.064	0.035	0.036	0.042	0.042	0.035	0.035	0.040	0.041
Observations	71731	71731	65203	65203	70340	70340	64013	64013	70341	70341	64058	64056
The above table reports the res *** indicate statistical signific	ults of the Fam cance at the 10	ia – MacBeth 3%, 5%, and	cross-section 1% levels, res	al regressions pectively.	. The number	s in parenthes	es are Newey	-West t-statis	tics with stan	dard errors ac	ljusted by 4 la	gs. *, **, and

Table 10. (Continued).

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the pricing effect of advance receipts during financial information disclosure. Similarly, the interaction term *Decile*  $\Delta AdvRptNi_q \times High SrhVol$  in Column (3) also yields an insignificant result.

In sharp contrast to the null result of interacting attention with advance receipts, the coefficient of *Decile*  $\Delta AdvRptNi_q \times High SrhVol$  in Column (2) and the coefficient of *Decile*  $\Delta Sales_q \times High SrhVol$  are both significantly positive, indicating that increasing attention is highly effective in enhancing the pricing efficiency of sales and earnings.

The results in Columns (5)–(12) show that investors typically disregard advance receipts when they trade stocks regardless of whether they pay high or low attention, as the coefficients of *Decile*  $\Delta AdvRpt_q \times High SrhVol$  and *Decile*  $\Delta AdvRptNi_q \times High SrhVol$  are insignificant in any of the 4 columns. However, the results of regressions (6), (8), (10), and (12) document that investors' trading behaviours become more responsive to sales and earnings growth if they could pay closer attention to stocks.

The results from Table 10 indicate that although increased attention makes investors more attentive to explicit performance indicators, such as sales and earnings, it essentially has no effect on advance receipts, which reflect performance information presented on the balance sheet rather than on the income statement. Overall, the findings of Table 10 are difficult to be explained by the traditional limited attention hypothesis (DellaVigna & Pollet, 2009; Hirshleifer et al., 2009; Jegadeesh & Livnat, 2006) but are highly consistent with investors' habitual thinking about financial statements.

# 5.2. Advance receipts and analyst forecasts

In this section, we further explore the relationship between advance receipts and analyst forecasts to gather direct evidence that investors have biased beliefs about a firm's future performance if they disregard advance receipts. Examining analyst behaviours also has the advantage of allowing us to determine whether stock market experts such as analysts would also undervalue advance receipts.

We first test the association between advance receipts and *Decile Forecasted*  $\Delta Sales_{y+1}$  (consensus 1-year-ahead sales forecast minus current-year sales divided by total market capitalisation) and advance receipts in Column (1) of Table 11. We observe a significantly positive coefficient of *Decile*  $\Delta AdvRpt_{q}$ , suggesting that analysts can adjust their sales forecasts based on advance receipts.

However, when we test *Decile*  $\Delta AdvRpt_q$  and the actual sales growth in the next year (sales in the following year minus the current-year sales divided by total market capitalisation), we find that the coefficient of *Decile*  $\Delta AdvRpt_q$  in Column (2) is almost twice that of Column (1), and the difference is significant at the 1% level. The distinction between actual and forecasted sales growth strongly suggests that analysts largely undervalue the performance information reflected in advance receipts, although they do not entirely ignore it. It is interesting to note that the coefficients of *Decile*  $\Delta Sales_q$  in Columns (1) and (2) are nearly identical, implying that analysts' interpretations of sales are generally accurate. We obtain similar findings in Columns (3) and (4); the actual impact of advance receipts on future earnings growth significantly exceeds analysts' expectations; however, there is no such difference between the coefficient of *Decile*  $\Delta Earnings_q$  in Columns (3) and (4).

	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)
	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised
	ΔSales <sub>y+1</sub>	ΔSales <sub>y+1</sub>	ΔEarnings <sub>y+1</sub>	ΔEarnings <sub>y+1</sub>	ΔSales <sub>y+2</sub>	ΔSales <sub>y+2</sub>	ΔEarnings <sub>y+2</sub>	ΔEarnings <sub>y+2</sub>
Decile <b>ΔAdvRpt<sub>q</sub></b>	0.0860***	0.1654***			0.0703***	0.1102***		
	(9.47)	(19.63)			(9.94)	(13.09)		
F & R-Diff	-0.0806***	(-12.24)			-0.0412***	(-2.99)		
Decile <b>ΔSales<sub>q</sub></b>	0.2490***	0.2370***			0.2432***	0.1720***		
	(22.18)	(21.36)			(16.93)	(11.56)		
F & R-Diff	0.0096	(0.56)			0.0711***	(3.54)		
Decile <b>ΔAdvRpt</b> Ni <sub>q</sub>			0.0478***	0.1080***			0.0441***	0.0711***
			(8.75)	(18.96)			(7.36)	(10.90)
F & R-Diff			-0.0603***	(-7.04)			-0.0270***	(-2.71)
Decile <b>ΔEarnings<sub>q</sub></b>			0.0664***	0.0930***			0.0761***	0.0213
			(3.50)	(4.18)			(3.95)	(0.98)
F & R-Diff			-0.0266	(-1.33)			0.0551***	(2.95)
Decile $\Delta CFO_q$	0.0031	0.0044	0.0106	0.0417***	0.0020	-0.0051	0.0173**	0.0308***
	(0.38)	(0.32)	(1.03)	(5.59)	(0.28)	(-0.51)	(2.56)	(3.99)
LnSize	-0.0422***	-0.0192***	-0.0243***	-0.0251***	-0.0487***	-0.0191***	-0.0373***	-0.0216**
	(-12.71)	(-6.67)	(-3.68)	(-4.31)	(-16.33)	(-9.60)	(-4.47)	(-2.40)
LnBM	0.0698***	0.0151	0.0624***	-0.0330***	0.0894***	0.0297**	0.0603***	-0.0132
	(12.33)	(1.60)	(6.31)	(-4.10)	(16.89)	(2.80)	(6.52)	(-1.44)
Leverage	0.6117***	0.2423***	0.4478***	0.0507**	0.6892***	0.2531***	0.4694***	0.0398
	(24.09)	(11.29)	(65.97)	(2.32)	(23.97)	(8.30)	(35.53)	(1.69)
Persistence	0.0250***	0.0141**	0.0333***	0.0138	0.0273***	-0.0006	0.0400***	0.0066
	(4.53)	(2.22)	(6.38)	(0.84)	(4.01)	(-0.06)	(6.29)	(0.30)
EarningsVol	-0.0406	-0.0980	1.5382***	-0.0533	0.0357	0.1071	2.0656***	0.0166
	(-0.07)	(-0.56)	(3.93)	(-0.17)	(0.06)	(0.59)	(5.12)	(0.05)
WcAcc	0.0645***	0.0589	0.0589	-0.1352***	0.0687***	0.0376	0.1320***	-0.1544***
	(4.59)	(1.61)	(1.39)	(-6.96)	(3.23)	(0.63)	(3.34)	(-3.50)
								(Continued)

Table 11. Advance receipts, analyst forecasts, and actual future performance.

Table 11. (Cont	inued).							
	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)
	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised	Decile Forecasted	Decile Realised
	ΔSales <sub>y+1</sub>	ΔSales <sub>y+1</sub>	ΔEarnings <sub>y+1</sub>	ΔEarnings <sub>y+1</sub>	ΔSales <sub>y+2</sub>	ΔSales <sub>y+2</sub>	ΔEarnings <sub>y+2</sub>	ΔEarnings <sub>y+2</sub>
Lag	0.0001	-0.0000	0.0001	-0.0002	0.0001	-0.0001	0.0002	-0.0002
	(1.03)	(-0.22)	(0.88)	(-1.35)	(1.32)	(-0.70)	(1.19)	(-1.52)
LnCov	0.0585***	0.0680***	0.0223***	0.0602***	0.0634***	0.0759***	0.0508***	0.0537***
	(10.71)	(38.91)	(3.16)	(14.33)	(13.83)	(11.95)	(5.26)	(4.52)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarters	15	15	15	15	15	15	15	15
Ave-Adj-R <sup>2</sup>	0.269	0.197	0.135	0.098	0.302	0.157	0.152	0.070
Observations	14710	14710	16233	16233	14631	14631	15953	15953
This table reports t	he results of the Fama -	- MacBeth cross-secti	onal regressions. The n	umbers in parenthes	es are Newey-West t-s	tatistics with standa	rd errors adjusted by 4	lags. *, **, and ***

я-hu-ч	607.0	0.19/	cc1.0	060.0	202.0	/0.10	70.0
servations	14710	14710	16233	16233	14631	14631	15953

indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

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In Columns (5) ~ (8), we look at the 2-year-ahead analyst forecasts and discover that analysts continually underestimate the effect of advance receipts on future performance. Moreover, prior literature finds that analysts' long-term forecasts tend to be very optimistic either intentionally or unintentionally (Easterwood & Nutt, 1999; Hong & Kubik, 2003). Consistent with prior literature, we also document that analysts over extrapolate current sales growth and current earnings growth too much to the future. Therefore, analysts' underestimation of advance receipts in Columns (5) ~ (8) further illuminate that the value of advance receipts is systematically ignored by analysts.

Overall, the results presented in Table 11 suggest that habitual thinking of financial statements is also likely to impede the judgement of stock market experts, such as analysts.

# 6. The price impact of advance receipts and contract liabilities after the adoption of the new revenue standard

Since 2020, A-share listed firms have fully adopted the new revenue standard. A stark difference between the new and prior standards is that the majority of transactions that were recorded in advance receipts now must be recorded in contract liabilities, and the new revenue standard severely restricts the use of advance receipts. Based on our estimation, from 2020Q1 to 2021Q2, contract liabilities represented 96.13% of the sum of advance receipts and contract liabilities. Although advance receipts may lose their price impact because they no longer contain material performance information, we do not think that our paper would be devalued due to the implementation of the new revenue standard, as investors are also very likely to overlook contract liabilities because of their habitual thinking related to financial statements. In this section, we examine and compare the price impact of advance receipts and contract liabilities in the new revenue standard ear.

We construct *Decile*  $\Delta CL$  (*Decile*  $\Delta CLNi$ ) in a manner similar to that used to construct *Decile*  $\Delta AdvRpt$  (*Decile*  $\Delta AdvRptNi$ ), where *CL* refers to contract liability. Since the construction of *Decile*  $\Delta CL$  (*Decile*  $\Delta CLNi$ ) requires year-on-year financial information, the sample period in this section begins in 2021. The analysis in this section covers only the first two quarters of 2021 due to the availability of the financial and stock return data when we were writing this paper, and the longest window in which to assess the price effect is [2, 100].

The results reported in Table 12 demonstrate that advance receipts no longer have a significant positive price effect in all windows, and the price impact of advance receipts documented in Tables 5 and 6 seems to be replaced by contract liability after the complete enactment of the new revenue standard. The short-term price impact of *Decile*  $\Delta CL$  and *Decile*  $\Delta CLNi$  around the financial report release date is very limited, while their long-term price impact *BHAR*[2, *t*] is monotonically increasing with *t*. Specifically, the arbitrage return corresponding to *Decile*  $\Delta CL$  estimated in the [2, 120] window is 4.77%, which is approximately 20 times larger than the short-term price effect *BHAR*[–1, 1]. These findings indicate that the majority of the performance information reflected in contract liabilities is not transmitted into stock prices in a timely manner.

Therefore, the results of Table 12 suggest that the main points of our paper remain relevant in the new revenue standard era. Investors still need to overcome their cognitive

-	(E)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)
BHAR	[-1, 1]	[2, 10]	[2, 30]	[2, 60]	[2, 120]	[-1, 1]	[2, 10]	[2, 30]	[2, 60]	[2, 120]
Decile <u>A</u> AdvRpt <sub>i,q</sub>	-0.0098***	-0.0048	-0.0099	0.0177	-0.003					
Derile ACL .	(-3.60) 0.0023	(-1.24) 0.0081**	(-1.53) 0.0118**	(1.61) 0.0201**	(-0.02) 0.0477***					
b'1->	(06.0)	(2.26)	(1.97)	(2.09)	(3.40)					
Decile <u>A</u> Sales <sub>iiq</sub>	0.0285***	0.0004	-0.0109*	0.0021	0.0016					
	(9.76)	(0.10)	(-1.65)	(0.19)	(0.11)					
Decile <b>ΔAdvRptNi<sub>i,q</sub></b>						-0.0027	-0.0021	-0.0065	0.0181*	-0.0081
						(96.0–)	(-0.52)	(-0.98)	(1.70)	(-0.53)
Decile ACLNi <sub>i,q</sub>						0.0061**	0.0107***	0.0158**	0.0254**	0.0493***
						(2.17)	(2.77)	(2.57)	(2.51)	(3.39)
Decile ∆Earnings <sub>i,q</sub>						0.0433***	0.0101**	-0.0026	-0.0054	-0.0093
						(14.79)	(2.35)	(-0.38)	(-0.47)	(09.0–)
Decile ACFO <sub>i,q</sub>	0.0072***	0.0011	-0.0001	-0.0113	-0.0035	0.0033	-0.0019	-0.0044	-0.0206*	-0.0139
	(2.83)	(0.31)	(-0.02)	(-1.14)	(-0.26)	(1.21)	(-0.49)	(-0.68)	(-1.91)	(+0.94)
LnSize	0.0026***	-0.0021**	-0.0050***	-0.0024	-0.0045	0.0023***	-0.0020*	-0.0043**	-0.0021	-0.0023
	(3.39)	(-1.97)	(-2.87)	(-0.84)	(-1.11)	(2.85)	(-1.71)	(-2.35)	(-0.71)	(-0.55)
LnBM	0.0016	0.0163***	0.0139***	-0.0070	0.0170***	0.0034***	0.0174***	0.0141***	-0.0060	0.0217***
	(1.35)	(6.17)	(5.07)	(-1.55)	(2.79)	(2.74)	(9.18)	(4.95)	(-1.28)	(3.41)
Leverage	-0.0065	0.0172**	0.0128	-0.0017	0.0273	-0.0039	0.0134*	0.0058	0.0127	0.0457
	(-1.32)	(2.43)	(1.07)	(-0.09)	(1.01)	(-0.74)	(1.79)	(0.47)	(0.60)	(1.53)
Persistence	0.0022	0.0020	0.0007	0.0074	-0.0010	0.0012	0.0029	-0.0011	0.0033	-0.0008
	(1.16)	(0.93)	(0.18)	(111)	(-0.12)	(0.56)	(1.17)	(-0.27)	(0.46)	(60.0–)
EarningsVol	0.0108	0.0905**	0.2193***	0.1326	0.1547	-0.0231	0.0912*	0.1957**	0.0369	0.0601
	(0.37)	(1.99)	(2.58)	(0.97)	(0.84)	(-0.65)	(1.85)	(2.12)	(0.25)	(0.31)
										(Continued)

	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)
BHAR	[-1, 1]	[2, 10]	[2, 30]	[2, 60]	[2, 120]	[-1, 1]	[2, 10]	[2, 30]	[2, 60]	[2, 120]
WcAcc	-0.0040	0.0139	0.0069	-0.0179	0.0093	-0.0173	0.0115	0.0205	-0.0132	0.0205
	(-0.33)	(16.0)	(0.25)	(-0.42)	(0.14)	(-1.36)	(0.71)	(0.73)	(-0.32)	(0.28)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-Quarter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R <sup>2</sup>	0.043	0.068	0.039	0:030	0.018	0.073	0.076	0.039	0.033	0.020
Observations	4697	4697	4697	4697	4697	4290	4290	4290	4290	4290
This table reports the re 5%. and 1% levels. re	sults of the OLS reservely.	egressions. The nu	mbers in parenth	ieses are t-statisti	ics with standard	errors clustered	by stocks. *, **, ar	id *** indicate st	atistical significa	nce at the 10%,

Table 12. (Continued).

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inertia and pay close attention to performance information recorded in balance sheet items, i.e. contract liabilities after the adoption of the new revenue standards.

# 7. Conclusion

Advance receipts contain valuable but difficult-to-notice performance information because under accrual accounting, advance receipts are recorded as an operating liability, which is shown on the balance sheet rather than the income statement. We claim that investors are likely to overlook advance receipts because they may have cognitive inertia about the functional positioning of the income statement and balance sheet. We verify this hypothesis with a set of cross-corroborating evidence.

We find that (1) while the price impact of advance receipts is positively significant in both the short-term financial report release window [-1, 1] and the long-term postrelease window [2, t], the latter grows continually over time and is much larger than the former. Specifically, *BHAR*[2, 250] attains nearly 20–30 times that of *BHAR*[-1, 1]. The contrast between the short-term and long-term price impacts suggests the market's failure to fully absorb the information content of advance receipts on the release of financial reports and results in a delayed response in stock prices. Additionally, advance receipts also predict earnings announcement returns in the following 4 quarters, further supporting our conjecture that the market systematically underestimates the performance information reflected in advance receipts. A trading strategy utilising investors' ignorance of advance receipts can yield 0.5%–1% monthly risk-adjusted returns.

- (1) In addition to the delayed reaction of advance receipts, we discover more evidence that investors do not pay enough attention to advance receipts relative to salient income statement performance measures during the financial report release window. Although advance receipts have a statistically significant short-term price impact, their economic significance is substantially lower than that of income statement performance indicators, such as sales and earnings. Regarding topic popularity, advance receipts are almost not discussed in EastMoney forums, in contrast to sales and earnings. Furthermore, investors actively trade stocks according to sales and earnings; however, no evidence exists that they consider advance receipts in their trading decisions. In other words, although important, advance receipts do not receive the deserved attention.
- (2) We further conclude that the underestimation of advance receipts is not the result of investors' limited information processing ability, as high investor attention significantly improves the short-term pricing efficiency of sales and earnings but has no effect on the pricing of advance receipts. We also use analyst forecasts to directly test whether overlooking advance receipts leads to biased beliefs of future performance and demonstrate that analysts significantly underestimate the ability of advance receipts to predict future sales and earnings growth.
- (3) After the implementation of the new revenue standard, the pricing of contract liabilities exhibits a pattern similar to the pricing of advance receipts under the prior revenue standard. In other words, investors' habitual thinking about financial

statements and the resulting pricing inefficiency are still present and need further investigation.

As we all know, accrual accounting inevitably results in a discrepancy between accounting recognition and cash flows, and the literature has extensively examined the pricing implications of accruals. However, while the prior literature has mainly focused on investors' overestimations of the persistence of accruals (Hirshleifer et al., 2004; Li & Niu, 2007; Richardson et al., 2005; Sloan, 1996; Xie, 2001), we contribute to this strand of literature by examining advance receipts, which also result from the aforementioned discrepancy but have a sign opposite to that of accruals. In other words, advance receipts occur when cash is received ahead of revenue recognition. Nevertheless, the accrual anomaly is typically attributed to investors' overoptimism about earnings in the absence of cash inflows.

We also highlight the importance of how information is presented (Hirshleifer & Teoh, 2003; Luo et al., 2018) and show that investors are not able to efficiently absorb performance information not reported on the income statement, such as advance receipts, due to their habitual thinking about financial statements. This issue is particularly crucial after the adoption of the new revenue standard. We strongly advise standard setters and researchers to carefully evaluate whether the new revenue recognition framework and the related new financial statement items make it more difficult for investors to assess a firm's profitability.

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