Promotional Pricing, Earnings Persistence, and Market Outcomes:

Do Analysts and Investors Discount Performance Backed by Coupons?

by

Mason Snow

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Graduate Supervisory Committee:

Andy Call, Chair
Phil Lamoreaux
Roger White

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ABSTRACT

Companies commonly offer temporary price discounts to stimulate product demand. Despite the considerable impact that such promotional strategies have on performance, firms disclose limited information regarding the extent to which they provide discounts. In this study, I evaluate whether market participants understand the implications of current period couponing activity – a special case of price discounts – for future performance. Using a sample of public manufacturers, I use transaction-level data to construct a firm-level measure of couponing activity and find that earnings are less persistent when generated with heavy reliance on couponing. Further, greater couponing in the current quarter increases analyst optimism for future periods, leading to an increased likelihood that the firm misses analyst expectations in the subsequent period (which results in predictably negative earnings announcement returns). Collectively, my findings highlight how market participants' forecasting and trading decisions can benefit from information regarding price discounting.

DEDICATION

I dedicate this dissertation to my family for their unwavering support of my doctoral studies. To my parents for their endless encouragement. To my wife for all she has sacrificed for my education. To my kids who helped me learn life's most important lessons. Words cannot express my love and appreciation for all of you.

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The results in the paper are calculated based on data from The Nielsen Company (US), LLC and marketing databases provided by the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the Nielsen data are those of the researchers and do not reflect the views of Nielsen. Nielsen is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.

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CHAPTER 1

INTRODUCTION

High-quality earnings not only summarize the results of historical operations but also inform forecasts of future performance (Dechow and Schrand 2004). Among the various properties of earnings, persistence has been acknowledged by academics and practitioners as being particularly useful in fundamental analysis and valuation.[1] Accordingly, market participants (e.g., analysts and investors) have strong incentives to understand the factors that influence earnings persistence. As a company's pricing strategy comprises a foundational input to its reported revenues, it follows that the effects of pricing on firm performance will flow through to earnings and potentially impact its persistence. In this study, I explore the implications that price discounts have on earnings persistence, and I evaluate whether market participants incorporate information relating to price discounting behavior into their forecasts and trading decisions.

Accounting researchers have suggested that temporary price discounts have the potential to materially impact current and future performance (e.g., Roychowdhury 2006). While the literature provides some evidence suggesting that companies offer price discounts to manage earnings, the proxies used in these studies to capture discounting are rather coarse.[2] Consequently, prior research provides only limited evidence regarding the extent to which companies discount prices and, importantly, the impact of those discounts

[1] Prior literature illustrates the predictive usefulness of earnings persistence (e.g., Kormendi and Lipe 1987; Melmuad and Nissin 2009; Sloan 1996). Additionally, sell side financial analysts (Brown, Call, Clement and Sharp 2015; Dechow and Schrand 2004) and CFOs (Dichev et al. 2013; Graham et al. 2005) report persistence as one of the most important dimensions of earnings quality.

[2] For instance, prior studies that have sought to measure price discounts do so via changes in gross margin percentage (e.g., Jackson and Wilcox 2000) or the residual from tests regressing operating cash flows on sales (Roychowdhury 2006).

on future performance. In this study, I seek to fill this gap in the literature by leveraging a unique dataset that captures information on manufacturers' couponing activity—a special case of promotional price discounts—to investigate (a) how price discounts influence the persistence of earnings, and (b) whether analysts and investors understand the implications of current period discounts for future performance.

Manufacturers commonly offer coupons to stimulate product demand, and such promotional activity can materially impact performance in future periods (Leone and Srinivasan 1996; Van Heerde et al. 2000; Anderson and Fox 2019). While many companies issue coupons to attract customers and temporarily boost sales, the revenue generated from these offers is typically less sustainable after the original prices are reinstated because many customers stockpile during the discount period or delay purchases in anticipation of similar promotions in the future. If coupons affect the predictability and sustainability of revenues, this impact will presumably reach the bottom line, resulting in less persistent earnings.

To test this notion, I construct a firm-level measure of couponing activity using a novel dataset of customer transactions from the Nielsen Consumer Panel. This data tracks hundreds of millions of shopping trips made by tens of thousands of households and collects detailed information about these purchases, including the amounts by which customers obtained price discounts as a result of coupon redemptions. After linking universal product codes (UPCs) to publicly listed manufacturers, I aggregate data from household-level shopping trips into firm-quarter measurements of couponing activity. In validation tests that employ firm fixed effects, I demonstrate that this measure exhibits a positive contemporaneous association with quarterly revenues and cost of goods sold and

negatively associates with gross margin percentage, consistent with firm performance reflecting increased sales volume at decreased prices.

I find that the persistence of seasonally differenced quarterly earnings is lower when couponing activity is higher. In terms of economic magnitude, a within-firm one-standard-deviation increase in couponing activity is associated with a 5.6% decrease in baseline earnings persistence. Cross-sectional tests provide modest evidence that this relation is more evident for firms operating in durable goods industries (i.e., whose products are more easily stockpiled). The association between couponing activity and persistence also emerges for revenues, cost of goods sold, and gross profit. This suggests that the relation between couponing and earnings persistence is driven by differences in fundamental performance as opposed to some artifact relating to accrual estimates.

Given these primary findings that couponing activity is associated with less persistent earnings and revenues, I explore whether market participants, such as analysts and investors, observe the extent to which companies rely on temporary promotional pricing to influence sales and/or incorporate the implications thereof into their forecasts and trading decisions. Despite the impact that promotional pricing can have on operating performance, public companies disclose little information (if any) about the extent to which price discounts are used in any given period. In the absence of information regarding the extent to which firms use price discounts as a temporary promotional activity, market participants may have difficulty incorporating the effects of price discounting into their expectations of future firm performance. Alternatively, the firms in my sample are large, publicly traded companies with presumably rich information environments. Sell-side analysts are sophisticated financial statement users that depend heavily on communication

with managers (Brown et al. 2015), therefore, they may rely on private information to compensate for the lack of disclosure. Similarly, investors may resort to alternative sources to inform their investing decisions. Hence, whether market participants observe or process information relating to promotional pricing is an empirical question.

To investigate this question, I examine analyst forecasts of earnings and sales. I find that in quarters where coupon activity is high, analysts overestimate the persistence of both earnings and revenues as evidenced by optimistically biased forecasts of subsequent quarter performance. This bias is economically meaningful for firms and investors as I find that couponing activity in the current quarter significantly increases the likelihood that firms miss analysts' consensus earnings and revenue expectations in the subsequent quarter.

I also examine whether investors incorporate the implications of current period price discounts into trading decisions. For these tests, I focus on the abnormal returns surrounding firms' earnings announcements. First, I examine whether investors discount the earnings news of firms exhibiting greater promotional pricing in the quarter when the earnings were generated. Specifically, I test whether earnings response coefficients vary based on the extent to which the firm engaged in couponing activity during the current period. As my results demonstrate that couponing activity is associated with less persistent earnings, and given that earnings persistence is a key determinant of earnings response coefficients (e.g., Collins and Kothari 1989), it follows that couponing should similarly associate negatively with contemporaneous earnings response coefficients. Nevertheless, across a variety of specifications, I fail to find evidence that earnings response coefficients covary with the level of couponing activity in the current period. This suggests that

investors are not pricing the implications of couponing activity at the time of the earnings announcement.

Motivated by the finding that couponing leads to optimistically-biased forecasts of subsequent quarter earnings (which results in an increased likelihood that firms miss earnings expectations), I proceed to examine whether current period couponing is predictive of the abnormal returns within the earnings announcement window of the subsequent quarter. My findings indicate that abnormal couponing activity in the current quarter is negatively associated with returns in the subsequent quarter. This suggests that, similar to analysts, investors overestimate the persistence of earnings backed by coupons and are disappointed when future earnings are announced. To further explore this finding, I analyze the returns to a trading strategy that leverages the finding that couponing activity results in less persistent earnings. After constructing portfolios based on quarterly sorts of firms' seasonally adjusted couponing, I find that a strategy taking a long position in a portfolio of stocks exhibiting abnormally low couponing in the current quarter and a short position in a portfolio of stocks exhibiting abnormally high couponing in the current quarter yields an average hedge return of 48 basis points over the three-day window surrounding the earnings announcement of the subsequent quarter. When I implement this strategy for firms operating in durable goods industries, a 145 basis point hedge return is realized. Collectively, my findings suggest that, despite the implications of couponing activity for future performance, market participants do not incorporate this information into their forecasting and investment decisions.

My study contributes to several streams of literature as well as to practice. First, I contribute to the literature that studies the factors underlying earnings persistence. Dechow,

Ge, and Schrand (2010) observe that, while there are many studies that examine the ways in which earnings persistence is affected by the accounting process, the factors relating to how fundamental performance impacts earnings quality are less understood.[3] This study provides evidence that promotional pricing efforts—a common business practice that companies employ to influence sales—meaningfully impacts the persistence of earnings.

I also contribute to the burgeoning literature that explores how alternative data in capital markets can be used to draw insights about firm fundamentals that might not be otherwise observable (see Dichev 2020). The use of alternative data in fundamental analysis and valuation has recently become mainstream practice among asset managers and is likely to become increasingly important over time (Watts 2019; Idzelis 2020). Not surprisingly, the search for and validation of trading strategies that exploit alternative data have attracted the attention of investors and accounting researchers alike (e.g., Kang et al. 2021; Chiu et al. 2020). Studies in this area typically utilize novel Big Data (such as satellite images of parking lots, cellphone GPS locations, Google searches, etc.) to predict future fundamentals and test whether the information is priced in financial markets. While these prior studies rely on indirect proxies to infer performance, my paper exploits actual transactions which constitute a relatively more direct manifestation of sales. Additionally, while most studies in this area use real-time measures of customer demand that *positively* covary with future earnings and returns, my study uniquely identifies a circumstance where

[3] Dechow et al. (2010) note, "While studies on implementation issues are strongly represented in the literature, research on the impact of fundamental performance on earnings quality is limited . . . As accountants, we have focused on the measurement of the [accounting] process, and in particular on implementation issues. More research on the impact of performance on reported earnings is essential to our understanding of earnings quality," (p. 349).

higher consumer activity in the current period actually predicts future *negative* earnings surprises and stock price *declines*.

Additionally, my study serves as a bridge between literatures in accounting and marketing by invoking the phenomenon of the post promotion dip to explain variation in earnings persistence. Studies in this area that use scanner data tend to hone in on a small number of product categories to document post promotion dips (Neslin and Stone 1996; van Heerde et al. 2004). To my knowledge, my study is the first to provide evidence of a post promotion dip based on firm-wide price discounting activity.

The findings of my study are also of potential interest to standard setters. Under GAAP, firms are only required to report revenues *net of discounts*, returns, and allowances, and as a result, few firms in my sample voluntarily disclose information regarding the extent to which sales were generated from promotional pricing campaigns. While my study does not speak to the net benefits of firms disclosing additional information relating to price discounts, my findings suggest that such disclosure has the potential to be useful to various financial statement users.

In the next section, I provide additional background information relating to manufacturer coupons, review related prior literature, and present my hypotheses. In the following section, I describe my data and provide further details related to the research design of my study. In the remaining sections, I present the results of my analyses and briefly conclude.

CHAPTER 2

BACKGROUND, PRIOR LITERATURE, AND HYPOTHESES

Manufacturer Coupons

Coupons, a special case of promotional price discounts, are pervasive in the U.S. economy. Ninety four percent of Americans used a coupon in their purchases at some point during 2019 and nearly half of consumers report using coupons "always or very often" (Valassis 2020). One industry report documents that in 2016, more than 300 billion coupons were distributed in the United States. Manufacturers are typically the party that sponsor coupon promotions and issue them directly to customers via retailers or coupon distributors. Paper coupons are distributed via newspapers, magazines, and direct mailings, and while paper coupon use is still dominant today, a growing share of coupons are acquired and redeemed digitally.

Coupons stimulate customer demand in a variety of ways. From a microeconomic perspective, given a level of demand, a decrease in price for some customers will result in a greater quantity consumed. However, behavioral forces likely play an even more powerful role in the efficacy of coupons in triggering additional sales. For example, mental accounting theory (Thaler 1983; Thaler 2008) predicts that individuals will frame such price discount promotions as a cash windfall and respond by immediately increasing spending on products they would have otherwise not purchased (Milkman and Beshears 2009). In an experimental study, Alexander et al. (2015) showed that the receipt of coupons elicited a neurophysiological response from participants who experienced a significant increase in oxytocin and a decrease in stress hormones. Coupon expiration dates also cause potential customers to experience "anticipatory regret" whereby the fear

of missing out on a deal prompts an increase in purchasing behavior towards the end of a promotion (Inman and McAlister 1994).

These studies align with an anecdotal example of JC Penney under the leadership of CEO Ron Johnson who, in 2012, completely eliminated the company's use of coupon promotions and replaced it with an "everyday low prices" structure. Subsequent to the policy change, customer backlash resulted in a sharp decline in sales and Johnson was dismissed the following year. Commenting on the debacle, Johnson said, "I thought people were just tired of coupons and all this stuff . . . the reality is all of the couponing we did, there were [sic] a certain part of the customers that loved that" (Tuttle 2013).

Literatures in marketing and economics have studied the ways in which companies utilize coupons to achieve strategic objectives. For instance, economists often perceive coupons as the canonical example of price discrimination whereby firms profitably charge different consumers different prices and provide evidence that coupon-redeeming customers exhibit more elastic demand (La Croix 1983; Narasimhan 1984). Other objectives that managers may pursue via coupons is to deepen market penetration, increase brand awareness, and build customer loyalty (Nevo and Wolfram 2002). While various features of coupon promotions will lead to idiosyncratic outcomes for firms, one consistent finding is held with broad consensus among researchers, namely, that coupons boost sales during the promotion period.

Price Discounts and the Post Promotion Dip

As price discounts can serve to temporarily increase sales, accounting researchers have suggested that managers can employ price discounts as a real earnings management device. Directly measuring the extent to which companies utilize price discounts has

proven challenging in this area. For instance, researchers have had to rely on either predicted residuals from models regressing operating cash flows on sales (e.g., Roychowdhury 2006) or changes in gross profit percentage (e.g., Jackson and Wilcox 2000; Oyer 1998) to proxy for price discounting behavior. A related study (Chapman and Steenburgh 2011) uses purchase data from retailers in two midwestern cities to examine the advertising actions associated with 38 canned soup brands. These authors find that the likelihood of promotional activity (such as feature advertisements, aisle displays, special prices) was significantly higher during quarters where the parent company owning these brands faced incentives to manage earnings. Roychowdhury (2006) describes this strategy as follows:

> "One way managers can generate additional sales or accelerate sales from the next fiscal year into the current year is by offering 'limited time' price discounts. The increased sales volumes as a result of the discounts are *likely to disappear* when the firm re-establishes the old prices," (emphasis added).

The marketing literature documents that the increased sales resulting from discounts disappear. This literature provides evidence of a phenomenon known as the post promotion dip, which describes a decline in sales following price-discount promotions. The post promotion dip stems not only from consumers stockpiling above-normal levels of goods during the promotional period (thus, decreasing the need to make additional purchases in the subsequent period) but also from customers delaying purchases in anticipation of similar price discounts in the future.

The magnitude of the post promotion dip varies and has been estimated to range from 4% to 25% of the current sales effect (Van Heerde et al. 2000). Several factors

influence the size of the post promotion dip. Chief among these factors is the ease with which customers are able to stockpile the purchased goods (Chung and Saini 2020). Mace and Neslin (2004) find that post promotion dips are greater when firms offer larger discounts (i.e., when higher total savings are at stake), when promotions are more frequent (i.e., the price discounts are more predictable), and when there the number of brands within a category is larger (i.e., when product preferences are not as clearly established).

(Non)Disclosure of Price Discounts

Under U.S. GAAP, companies are required to report revenues net of discounts, returns, and allowances, so while companies likely track the impact of price discounts on gross revenues internally, this information is not available to financial statement users. Some firms voluntarily disclose information relating to promotional pricing. Examples of these disclosures for some of the public companies that are firmly engaged in couponing activity can be found in Appendix A. For example, in the MD&A section of the 2020 annual report for General Mills, management presents an end-of-year estimate of trade and coupon promotion liabilities of $471 million. Among other promotional activity, this amount relates to outstanding coupons that may yet be redeemed in the future. In the second example, Kellogg's notes that differences between estimated and realized coupon redemptions approximate 0.5% of total sales, but this figure does not describe the total extent to which coupons were used during the fiscal year. Lastly, Procter and Gamble (a company that engages in more couponing activity than any other company in my sample) does not provide any quantitative information relating to coupon promotions and simply states how the company accounts for such. These examples describe the spectrum of the extent to which companies publicly disclose price discounting information.

Predictions

In summary, prior studies illustrate that coupons serve to boost sales during periods of promotional activity, albeit at the cost of future revenues. This naturally leads to the prediction that revenues (and by extension, earnings) are less persistent in the presence of greater couponing activity. If companies exhibit a firm-wide post promotion dip, then one might additionally expect this effect to be greater for firms selling goods that are more easily stockpiled. This discussion is formalized in the following directional hypotheses:

> **Hypothesis 1**: Earnings will be less persistent in the presence of greater couponing activity.

> **Hypothesis 1a**: The relation between earnings persistence and couponing activity will be more pronounced for firms whose products are more easily stockpiled.

I also test whether market participants observe or understand the implications of current period couponing for future performance. As public disclosure of discounting activity is limited, one might expect analysts to overestimate subsequent period forecasts of revenues and earnings when firms engage in greater couponing in the current period. Additionally, if investors are unable to observe the extent to which firms rely on couponing to generate sales and earnings, they will likely be disappointed when current period performance fails to persist into subsequent periods. However, as analysts often rely on private communication with managers (Brown et al. 2015), they may be able to lean on alternative information channels to compensate for the lack of disclosure. Similarly, investors may resort to alternative sources to inform their investing decisions. Therefore,

whether market participants track information from promotional pricing and/or understand its implications for future performance is an empirical question. I formalize this discussion in the following hypothesis expressed in the null form:

> **Hypothesis 2**: Market participants do not systematically fail to incorporate information relating to couponing in forecasts of future performance.

CHAPTER 3

DATA AND RESEARCH DESIGN

Data and Sample

To measure the extent to which firms engage in coupon promotions, I obtain transaction-level data from the Nielsen Consumer Panel database from the Kilts Center for Marketing at the University of Chicago.[4] These data contain information about daily product purchases made by a representative panel of approximately 50,000 U.S. households. Panelist households are given an optical scanner with which they scan the Universal Product Code (UPC) barcodes of all consumer-packaged goods they purchase across a wide variety of retail channels in U.S. markets (e.g., food, non-food grocery, health and beauty, and other general merchandise). For each transaction, I observe the purchase date, UPC, product name, transaction price, and quantity of the items being purchased. Importantly for my study, the Consumer Panel data also indicate whether, in addition to any price discounts offered by the retailer, a coupon was redeemed by the customer for a particular product as well as the face value of the coupon discount.

An emerging interest in the Nielsen data has manifested in recent accounting studies. For instance, Dichev and Qian (2021) leverage the timeliness and granularity of retail sales captured in the Nielsen data to construct a measure of aggregate consumer purchases that strongly predicts manufacturer revenues, analyst forecast errors, and future abnormal returns. The data have also been used to test for consumer backlash in response to corporate tax aggressiveness by Asay, Hoopes, Thornock, and Wilde (2021) who restrict

[4] Where other studies using the Nielsen data tend to rely on the Retail Scanner database (e.g., Dichev and Qian 2021; Asay et al. 2021), I use the Consumer Panel as it uniquely provides data relating to the redemption of coupons.

their analyses to sales of products with recognizable brand names, as do Chenarides, Christensen, Kenchington, and Snow (2021), who further examine whether the propensity to boycott tax aggressive companies varies with the demographic characteristics of the Nielsen panelists. In my study, the primary advantage that I exploit is the tracking of coupon redemptions.

To construct my sample, I retrieve data from the Purchases file of the Nielsen Consumer Panel Data for the years 2004 – 2017, retaining all products that were ever purchased with a coupon (63,492 distinct brands). I then manually identify the parent company owning each of the top 5,000 brands in terms of total coupon value.[5] While this process yields hundreds of international and private companies, I retain only public manufacturers whose shares are traded on the NYSE or NASDAQ stock exchanges (n = 86).[6] After merging these firms with the intersection of the Compustat and CRSP databases, I obtain a baseline sample of 2,797 firm-quarter observations with non-missing data for my tests, which I describe in more detail below in Section 3.2.1.

While all of the firms in my sample are manufacturers, they operate across a variety of industries. Motivated by prior studies that document a greater post promotion dip for durable goods, I separate firms into two groups based on Fama French 12 industry groups that identify manufacturers that produce primary nondurable goods. Examples of such industries include meat, grain mill, and other bakery products. I then classify all other firms in my sample as "durable goods firms" which includes industries such as paper mills, household appliances, soaps, detergents, and cleaning preparations. In some tests, I

[5] The coupon value redeemed for these 5,000 brands represents 94% of total coupon redemptions of all brands in the Products file.
[6] Specifically, companies with SIC codes between 2000-3999.

separately analyze firms based on industry membership to evaluate whether the relation between revenue persistence and couponing is more pronounced for firms operating in durable goods industries. Table 1 lists the various industry breakdowns in greater detail.

Variable Measurement and Research Design

To test H1, I examine whether earnings persistence varies based on the couponing activity of firm i in quarter t by estimating the following ordinary least squares model, following Jin, Stubben, and Ton (2021):

$$\begin{aligned}\Delta EPS_{i,t+1} = {} & \gamma_1 \Delta EPS_{i,t} + \gamma_2 Coupon_{i,t} + \gamma_3 \Delta EPS_{i,t} \times Coupon_{i,t} + \gamma_4 Size_{i,t} + \\ & \gamma_5 \Delta EPS_{i,t} \times Size_{i,t} + \gamma_6 MB_{i,t} + \gamma_7 \Delta EPS_{i,t} \times MB_{i,t} + \\ & \gamma_8 Leverage_{i,t} + \gamma_9 \Delta EPS_{i,t} \times Leverage_{i,t} + \gamma_{10} Accruals_{i,t} + \\ & \gamma_{11} \Delta EPS_{i,t} \times Accruals_{i,t} + \gamma_{12} Volatility_{i,t} + \gamma_{13} \Delta EPS_{i,t} \times \\ & Volatility_{i,t} + \alpha_i + \alpha_t + \varepsilon_{i,t+1} \qquad (1).\end{aligned}$$

To account for the seasonal variation in quarterly sales, I model quarterly earnings as an autoregressive process of order one (AR1) in seasonal differences (Foster 1977). Seasonally adjusted earnings (ΔEPS) is measured as reported earnings per share in quarter t minus earnings per share in quarter t-4.[7] I demean all independent variables in Equation 1 other than ΔEPS to facilitate the interpretation of the coefficient, γ_1 (baseline earnings persistence), as well its economic comparison to that of γ_3 (differences in earnings

[7] Deflating performance measures (e.g., earnings) serves to reduce heteroscedasticity in persistence models (Dichev and Tang 2009). The use of shares to deflate earnings has at least two advantages. First, it avoids the difficulties that would arise from scaling by small or negative earnings. Secondly, it avoids problems resulting from scaling by assets while simultaneously including a size control variable that is constructed using total assets (Certo et al. 2020; Lev and Sunder 1979). That said, similar inferences emit from tests using seasonally differenced return on assets.

persistence attributable to couponing). A negative coefficient for γ_3 would be consistent with H1 and indicate that earnings persistence is decreasing in coupon activity.

I control for firm characteristics that prior studies have shown to impact persistence (see Frankel and Litov 2009). Larger firms tend to have more persistent earnings (Francis et al. 2004), so I control for firm size (*Size*) as defined as the natural logarithm of total assets. Persistence can also be affected by firm growth (Beaver et al. 1970) and capital structure (Dhaliwal et al. 1991), so I control for the firm's market-to-book ratio (*MB*) and leverage (*Leverage*). Furthermore, earnings that consist of greater levels of accruals tend to be more volatile and less persistent (Sloan 1996; Dichev and Tang 2009), so I control for a firm's level of absolute total accruals (*Accruals*) and earnings volatility (*Volatility*). The main effect of each of these variables, in addition to its interaction with ΔEPS, is included in Equation 1 to control for the effect of each on earnings persistence. I provide more detailed information as to how each of these variables is calculated in Appendix B.

To control for additional characteristics influencing earnings persistence that are not captured by the above covariates, I also include different fixed effect structures in separate regressions. The primary advantages of including firm and year-quarter fixed effects is that they provide for a within-firm design with a more temporally precise control for macroeconomic trends. Such a design captures differences in persistence based on variation in couponing activity across time and within firms as opposed to relying on between-firm differences in couponing. However, econometricians have long observed that including unit fixed effects in models using a lagged dependent variable regressor results in biased coefficient estimates (Wooldridge 2010). To address this concern, I separately tabulate the results of all persistence tests to include either industry and year

fixed effects or firm and year-quarter fixed effects. To mitigate the impact of influential observations, I winsorize all continuous variables at the 1st and 99th percentiles. Standard errors are clustered by firm to adjust for correlation in the error term across years for the same firm (Petersen 2009).

For my initial tests of H2, I examine the association between couponing and analyst forecast bias. Specifically, I test for whether analysts incorporate information relating to the couponing of firm i in quarter t in their forecasts of future performance in quarter t+1 by estimating the following ordinary least squares model:

$$Forecast\ Bias_{i,t+1} = \beta_1 Coupon_{i,t} + \beta_2 Size_{i,t} + \beta_3 MB_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 Accruals_{i,t} + \beta_6 Earnings\ Volatility_{i,t} + + \beta_7 Foreign_{i,t} + \beta_8 Guidance_{i,t} + \beta_9 Analyst\ Following + \alpha_i + \alpha_t + \varepsilon_{i,t+1}, \quad (2).$$

The dependent variable, *Forecast Bias*, denotes the forecast bias of the most recent analyst consensus estimate of earnings per share (or sales) just prior to the earnings announcement corresponding to fiscal quarter t+1. Forecast bias for earnings (sales) is calculated as the mean consensus forecast of earnings per share (sales) minus the actual reported earnings per share (sales), scaled by stock price at the end of quarter t. I employ all of the same control variables as in Equation (1) and include additional controls that likely influence analyst forecasting accuracy. Specifically, I include indicator variables to control for whether the firm has foreign sales (*Foreign*) or has issued earnings guidance (*Guidance*). I additionally control for the number of analysts providing earnings forecasts for the firm (*Analyst Following*). Firm and quarter-year fixed effects are also included.

In this model, the coefficient of interest, β_1, indicates whether analyst forecast bias is more positive or negative in the presence of greater couponing activity. If couponing results in less persistent earnings – and if analysts either do not observe couponing activity or do not understand its implications for future performance – then a negative coefficient for β_1 would be expected, consistent with forecasts of earnings (and sales) for quarter t+1 reflecting an increasingly optimistic bias as couponing activity in quarter t increases. However, if analysts observe and duly incorporate information from couponing in their forecasts or if current period couponing lacks informative value about future performance, then one would not expect β_1 to significantly differ from zero.

To provide further evidence relating to H2, I examine whether investors observe current period couponing or understand its implications for future performance by separately estimating the following ordinary least squares models:

$$EA\ CAR_{i,t} = \delta_1 UE_{i,t} + \delta_2 Coupon_{i,t} + \delta_3 UE_{i,t} \times Coupon_{i,t} + Controls + \alpha_i + \alpha_t + \varepsilon_{i,t} \quad (3)$$

$$EA\ CAR_{i,t+1} = \theta_1 UE_{i,t+1} + \theta_2 Coupon_{i,t} + Controls + \alpha_i + \alpha_t + \varepsilon_{i,t+1} \quad (4).$$

Equation 3 tests whether the market reaction to earnings news covaries with the level of firms' couponing activity during the periods in which the earnings were generated. In this model, $EA\ CAR_{i,t}$ denotes the cumulative abnormal returns for the three day window surrounding the earnings announcement of firm i for fiscal quarter t. These abnormal returns are regressed on the firm's reported earnings surprise (UE), couponing activity ($Coupon$), the interaction between these variables, and controls. Control variables are the

same as those employed in Equation 2 and fixed effects for each firm and year-quarter are included.

I demean $Coupon$ in this specification, therefore, the coefficient for UE (δ_1) is the earnings response coefficient (ERC) for the hypothetical firm exhibiting an average level of couponing. The coefficient of interest for this test relates to the interaction between UE and $Coupon$ (δ_3) which indicates whether and how ERCs vary based on firms' contemporaneous couponing activity. If earnings are more (less) persistent in the face of greater couponing, and investors impound this differential persistence into the pricing of earnings news (Collins and Kothari 1989), then a positive (negative) coefficient for δ_3 would be expected. A null result here would be consistent with coupon activity bearing no material influence on future performance or investors failing to observe and incorporate information relating to couponing into their processing of earnings news.

In Equation 4, I continue to test for investors' use of couponing information in their investment decisions. The dependent variable in this model ($EA\ CAR_{i,t+1}$) is the cumulative abnormal returns for the three-day window surrounding a firm's earnings announcement for quarter t+1, or in other words, the fiscal period subsequent to the couponing activity in quarter t. In this specification, I include all control variables from previous models as well as the earnings surprise corresponding to quarter t+1. Again, this model employs a firm-and year-quarter fixed effects structure. The coefficient of interest is θ_2 which estimates the association between couponing activity in quarter t and the *future* abnormal returns in quarter t+1. Assuming semi-strong form market efficiency, for θ_2 to significantly differ from zero: (1) couponing activity must be informative regarding future

performance and (2) investors must not observe or understand the implications of current period couponing for future performance.

CHAPTER 4

EMPIRICAL ANALYSES

Descriptive Statistics

The summary statistics for the variables in my analyses are presented in Table 2. The manufacturers in my sample are relatively large with median revenues in excess of $1.6 billion and with median analyst following of 11. Among these U.S.-listed manufacturers, roughly one-third report a foreign currency adjustment (the mean for *Foreign* equals 0.29). This is important to note as I only observe coupon redemption for firms' customers making purchases in the U.S. A minority of firm-quarters (20.5%) correspond to firms issuing earnings guidance, which may reflect an on-average reduced ability for managers to guide the expectations of analysts and investors. Recall that my tests are structured using firm fixed effects; hence, these and other control variables are designed to capture the effects of within-firm changes. In other words, I do not compare forecasting accuracy across firms that issue or do not issue earnings guidance, rather, *Guidance* captures differences in forecasting across periods when a firm begins or ceases to issue earnings guidance.

The mean value for *Coupon* indicates that, during the average firm-quarter, customers in the Nielsen panel redeem coupons amounting to $13,400. While this may initially appear to be trivial, recall that this reflects the purchasing behavior of approximately 50,000 households. A simple back-of-the-envelope calculation extrapolates these purchases to the 150 million households in the U.S. and estimates average coupon redemption of nearly $40 million. Table 3 presents a matrix of correlation coefficients for the main variables in my analyses.

Before proceeding to tests of my hypotheses, I conduct basic regressions to validate that my measure of couponing reflects meaningful and intuitive on current period performance. I do this by regressing several income statement measures on $Coupon$ and control variables in models with firm and year-quarter fixed effects. The results of this analysis are presented in Table 4.

Columns 1-3 of Table 4 correspond to regressions of *Revenue*, *Cost of Goods Sold*, and *Gross Profit*, respectively. Firm size naturally exhibits a strong, positive association with these measures. This variable, in concert with the fixed effect structure of these tests, contributes to the high explanatory power of these models with adjusted R-squares in excess of 95%. The coefficient for $Coupon$ is significant and positive in each of these specifications, indicating that firm-wide sales, cost of goods sold, and gross profit are higher during periods of greater couponing activity. In Columns 4-5, I re-estimate the models of Columns 1-2 using logged measures of revenues and cost of goods sold. Again, positive and significant coefficients for $Coupon$ emit for each of these specifications. The point estimate for *ln(Cost of Goods Sold)* is larger in magnitude than that of *ln(Revenue)*, indicating that changes in couponing activity will result in a greater response in cost of goods sold relative to revenue (in percentage terms).[8] This is consistent with the result in Column 6 where firms' gross profit as a percentage of revenue (*Gross Margin*) is decreasing in coupon activity.

[8] To confirm the statistical difference, I use seemingly unrelated regression (Zellner 1962) to estimate these models as a system and test for differences in coefficients across equations. While the economic magnitudes differ only slightly (a within-firm standard deviation increase in Coupon corresponds to a 1.0% increase in sales and a 1.2% increase in cost of goods sold), they are statistically different (Chi-square = 3.96, p =0.047).

These results are consistent with intuition. As discussed earlier, coupons increase sales volume and, assuming that costs per unit remain largely unaffected by coupons, will directly increase the cost of sales. On the revenue side, increased sales volume coupled with a decreased price for some consumers leads to a relatively more ambiguous prediction as to how coupons associate with total revenues, hence, the statistically weaker linear relation. Collectively, the results of Table 4 serve to validate my measure of couponing by demonstrating that, after controlling for size, within-firm changes in couponing positively covary with sales and negatively associate with gross margin.

Persistence Tests

Table 5 presents the regression results from estimating Equation 1. Column 1 reports the results from a specification including industry and year fixed effects. The coefficient on the main effect of ΔEPS indicates that the baseline persistence of seasonally adjusted quarterly earnings per share is 0.526 (t-stat = 22.10). The negative coefficient for $\Delta EPS \times Accruals$ aligns with prior work (Sloan 1996; Dichev and Tang 2009) and indicates that earnings are less persistent when they are composed of accruals to a greater extent. The independent variable of interest, $\Delta EPS \times Coupon$ is also negative and significant (coef = -0.460; t-stat = -3.10), which suggests that earnings are less persistent when generated during periods of greater couponing activity. This result is consistent with the prediction of the post-promotion dip literature in marketing and lends support to H1.

One of the primary determinants of the post-promotion dip is the ability to stockpile goods in household inventories. Accordingly, H1a posits that the relation between earnings persistence and couponing will be more pronounced for firms operating in durable goods

industries (i.e., firms whose products are more easily stockpiled). To explore this cross-sectional prediction, I partition my sample based on Fama French 12 industry membership. Specifically, I separately categorize firms belonging to Fama French 1 "nondurables" from the other firms in my sample which I refer to simply as "durables" (See Table 1). Column 2 presents regression results from the durables sample where the coefficient estimate is more negative and statistically significant (coef = -0.572, t = -4.22) relative to the results of the pooled sample. In Column 3 (nondurables), the coefficient is negative but only marginally significant (coef = -0.406, t = -1.74). While the economic and statistical significance appear stronger for durables compared to nondurables, a test of the difference in coefficients is unable to delineate a statistical difference between the two ($p > 0.10$). Overall, these tests provide only modest evidence that the impact of couponing on earnings persistence varies between durable versus nondurable goods.

Lastly, I tabulate results from a specification using a firm and year-quarter fixed effects structure in Column 4 and find inferentially similar results to those of Column 1. As noted in Section 3.2.1, estimating lagged dependent variable models with unit fixed effects is potentially problematic; however, firm fixed effects also provides several advantages as it allows for a within-firm design and it facilitates an arguably more appropriate interpretation of economic significance. Taking the coefficients in Column 4 at face value, one would expect a within-firm one-standard-deviation increase in couponing to result in somewhere between 5.6% less persistent earnings.[9] Taken together, the results

[9] Because this model uses firm fixed effects, I gauge the economic significance of my results by first calculating the mean within-firm standard deviation in *Coupon* (0.055) to get a semblance of a reasonable within-firm range in couponing activity (deHaan 2021; Mummolo and Peterson 2018). I then multiply this by the coefficient $\Delta EPS \times Coupon$ (-0.494) and divide by the baseline earnings persistence coefficient (0.490).

of Table 5 provide support of H1 and indicate that couponing negatively associates with earnings persistence, with limited evidence that this relation is more evident for firms operating in durable goods industries.

To further explore the effect of coupons on earnings persistence, I conduct additional tests that focus on the persistence of revenues, cost of goods sold, and gross profit. For each of these performance measures, I estimate the following least squares AR(1) model:

$$\Delta Performance_{i,t+1} = \rho_1 \Delta Performance_{i,t} + \rho_2 Coupon_{i,t} + \rho_3 \Delta Performance_{i,t} \times Coupon_{i,t} + Controls + \Delta Performance_{i,t} \times Controls + Fixed\ Effects + \varepsilon_{i,t+1} \quad (5),$$

where $\Delta Performance$ is equal to seasonally-differenced revenues, cost of goods sold, or gross profit.. For instance, I measure $\Delta Revenues_t$ as the revenues of firm i in quarter t minus revenues in quarter t-4, scaled by revenues in quarter t-4. The controls are identical to those employed in Equation 1.

These regression results are presented in Table 6. For parsimony, I omit coefficient estimates for the control variables. Across all models, the coefficients corresponding to the interaction between $Coupon$ and each seasonally differenced performance measure are negative and significant. Based on the estimates of the firm fixed effects specifications, the economic magnitudes of these coefficients suggest that a within-firm standard deviation increase in couponing would result in a 1.8% decrease in baseline revenue persistence, a 2.5% decrease in the persistence of cost of goods sold, and a 2.4% decrease in gross profit persistence. The finding that, relative to revenues, the persistence of costs of goods sold is more sensitive to changes in couponing is consistent with the results of Table 4.

Additionally, that couponing impacts the persistence of revenues and cost of goods sold supports the conclusion that the differential earnings persistence is driven by changes in sales transactions (i.e., fundamental performance) as opposed to changes in accounting estimates (i.e., accrual measurement), thus answering the call of Dechow et al. (2010). Overall, these results, coupled with the findings of Tables 4-5, illustrate the material impact that promotional price discounts can have on current and future performance.

Analyst Forecasts

Having established that earnings and revenues are less persistent in the face of greater couponing activity, I proceed to tests of H2 where I investigate whether capital market participants use information regarding firms' couponing in forecasting and investing decisions. In Panel A of Table 7, I report results from estimating Equation 2 where the bias of analysts EPS and sales forecasts in quarter t+1 are regressed on couponing activity in quarter t. In Column 1, the positive coefficient for $Coupon$ (coef = 0.002, t-stat = 1.98) indicates that the consensus analyst earnings forecast bias in quarter t+1 is more positive as couponing activity in quarter t increases. This is consistent with analysts overestimating the persistence of earnings that are generated with price discount promotions. In Column 2, the results suggest that couponing activity induces a similarly optimistic bias in analysts' forecast of sales as well (coef = 1.662, t-stat = 1.86).

As a robustness test, I calculate the seasonal difference in *Coupon* and label this new variable as abnormal couponing (*AbnCoupon*). In other words, this variable captures the extent to which couponing in the current quarter differed from that of the same quarter of the prior year, which may serve as a proxy for the incrementally "unexpected" portion of couponing activity. In Columns 3 and 4 of Table 7, I find that abnormal couponing also

positively covaries with EPS forecast bias (coef = 0.001, t-stat = 1.80) but not with sales forecast bias. Collectively, the results of Table 7, Panel A provide do not reject Hypothesis 2 as they suggest that analysts do not observe or incorporate information from couponing in their forecasting decisions.

To speak to the economic significance of these findings, I conduct additional tests that assess how coupon activity impacts the likelihood of meeting or beating earnings expectations. Specifically, I construct indicator variables set equal to one for firm-quarters where reported earnings per share or sales falls below the most recent analyst consensus estimate in quarter t+1 (*Miss*), and regress these on the independent variables of Equation 2 that are measured as of quarter t. The results of these tests are presented in Panel B of Table 7. In Columns 1-2, I employ a linear probability model and find that the coefficients for $Coupon$ are positive and significant. For robustness, I tabulate estimates derived from a conditional logistic model in Columns 3-4 and find inferentially identical results. These findings suggest that, beyond than simply optimistically biasing analysts' forecasts of future performance, couponing in the current period significantly increases the likelihood that firms miss earnings and expectations in the subsequent quarter. Because of the equity market consequences associated with meeting or beating earnings expectations (Bartov et al. 2002; Matsumoto 2002), these results suggest that couponing can have nontrivial consequences for the firms that engage in these price promotions.

Market Reaction Tests

Lastly, I evaluate whether investors understand the implications of current period couponing for future performance. First, I evaluate whether investors discount earnings surprises that are backed by greater coupon activity. In other words, I examine whether the

market processing of earnings news for fiscal quarter t varies with couponing activity during quarter t. This test is based on estimating Equation 3, the results of which are presented in Table 8. In Column 1, I report a baseline model without any coupon variables. Naturally, the earnings response coefficient, on *UE* is positive and significant. In Column 2, I allow the earnings response coefficient to vary with *Coupon*, however, the coefficient for this interaction term is not significant. In Column 2, I replace *Coupon* with *AbnCoupon*, and its interaction with *UE* is also insignificant. It is possible that the impact of couponing on the pricing of earnings news is nonlinear, so I additionally estimate a specification using an indicator variable, *High AbnCoupon*, which is set equal to one for firm-quarters whose value for *AbnCoupon* falls in the highest quartile of all observations. The results for this specification are presented in Column 4 where, again, I fail to find evidence that investors discount earnings based on couponing activity. These results are inconsistent with investors observing and accounting for the differential persistence induced by greater couponing at the time earnings surprises are priced.

I proceed to evaluate whether information about couponing activity in quarter t can be used to predict future abnormal returns during the earnings announcement window corresponding to fiscal quarter t+1. Results from estimating Equation 4 are presented in Table 9, Panel A. Column 1 presents a baseline model. In this regression with firm fixed effects, control variables are largely insignificant with the exception of unexpected earnings, *UE*, which explains much of the variation in earnings announcement abnormal returns. In Column 2, I include the *Coupon* variable, but I do not find systematic differences in abnormal announcement returns based on varying levels of raw couponing activity. In Column 3, however, *AbnCoupon* loads negatively and significantly (coef = -0.032, t = -

1.72), indicating an on-average negative relation between abnormal couponing activity in quarter t and announcement returns in quarter t+1. Similar to Table 9, I include the dichotomous variable, *High AbnCoupon*, in Column 4 to mitigate a potential concern that this effect is driven by a small number of influential observations. The coefficient here is also negative and significant (coef = -0.008, t = -2.14) and can be interpreted as subsequent quarter announcement abnormal returns being 80 basis points lower for firms engaging in the greatest increases in couponing. These findings, in connection with the analyst tests from Section 4.3, are consistent with H2 and suggest that market participants do not fully understand the implications of couponing for future performance, or at least do not impound such into price.

To further understand the informative value of couponing activity for future returns, I depart from multivariate analysis and conduct a trading strategy analysis. As the results from Table 9, Panel A suggest that abnormal couponing negatively predict future earnings announcement abnormal returns, the resulting trading strategy would take a long position in firms engaging in the lowest abnormal couponing and a short position in firms exhibiting the highest level of abnormal couponing. To conduct this analysis, I construct four portfolios of firms based on quarterly quartile sorts of *AbnCoupon*. For each portfolio, I calculate the mean cumulative abnormal return over the three day window surrounding the earnings announcement for operations during quarter t+1.

The results of this analysis are presented in Table 9, Panel B. While the average abnormal returns monotonically decrease in *AbnCoupon*, none of the individual portfolio returns are significantly different from zero. The returns from the hedge position are marginally significant (48 basis points, t-stat = 1.74). Because the majority of firms in my

sample share the same fiscal year ends (and thus will be announcing earnings during similar periods), I make the conservative assumption that this strategy can be implemented only four times each year. Thus, I annualize the returns produced from such a strategy by multiplying the average abnormal returns by four and find that the hedge strategy yields an annualized return of 1.92%. While the size of this abnormal return appears minimal, recall that this return is achieved across only 12 trading days, and my assumption about being able to execute this trading strategy four times a year is a lower bound.

Motivated by theory and the evidence in Table 5, I re-conduct this analysis using only firms operating in durable goods industries and I present the results in Table 9, Panel C. Again, the returns are monotonically decreasing across the quartiles of *AbnCoupon*. This time, the average returns for the high and low portfolios strategy are individually significant. The hedge position produces annualized abnormal returns of 5.80%. Collectively, the results of Table 9 suggest that increased disclosure regarding price discounting activity may potentially improve the price efficiency for the firms in my sample.

CHAPTER 5

CONCLUSION

An understanding the properties of revenues and earnings is essential for the forecasting and trading decisions of market participants, and one foundational input to revenues is the pricing of firms' goods. In this study, I leverage a unique dataset to explore how couponing – a special case of price discounts – covaries with the persistence of revenues and earnings. I find that revenues and earnings are less persistence when companies rely heavily on couponing activity. Additionally, I provide evidence suggesting that analysts and investors do not understand the implications of current period couponing for future performance. Specifically, I find that couponing activity in the current quarter induces an optimistic bias in analyst forecasts of future earnings and revenues and predicts future negative abnormal returns. These findings contribute to our understanding of (1) how fundamental performance affects earnings persistence, (2) the extent to which price discounts influence performance in current and future periods, and (3) ways that market participants could benefit from incorporating information from price discounts in their forecasts and investment decisions.

Like all studies, mine is subject to limitations. One concern is that my measure of couponing activity is derived from a sample of firms' U.S. customers and, thus, is not an exact dollar amount of coupon redemptions that occur within a quarter. However, the Nielsen Company strives to achieve a panel of households that is representative of the general U.S. population, and researchers have validated this notion (Bronnenberg et al. 2015). As less than a third of my sample firms report a foreign currency translation

adjustment, measuring the purchasing activity of firms' U.S. customer base likely captures the bulk of firms' sales.

Additionally, the sample firms that I analyze are admittedly few in number. While only a limited number of public manufacturers are significantly involved in issuing coupons, the idea that temporary price discounts lead to less sustainable revenues likely generalizes to private manufacturers as well as other public companies that utilize price discounts to influence sales transactions. Future research could continue to explore the ways in which coupons and other price discounting activities interact with managerial incentives and influence firm performance.

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APPENDIX A

SAMPLE COUPON DISCLOSURES

General Mills 10-K, 2020

"Our revenues are reported net of variable consideration, including trade promotion, consumer coupon redemption, and other reductions to transaction price. Trade promotions are recorded using significant judgment of estimated participation and performance levels for offered programs at the time of sale. Differences between the estimated and actual reduction to transaction price is recognized as a change in estimate in a subsequent period. *Our accrued trade and coupon promotion liabilities were $471 million as of May 31, 2020, and $410 million as of May 26, 2019*." (emphasis added)

Kellogg's 10-K, 2020

"Our promotional activities are conducted either through the retail trade or directly with consumers and include activities such as in-store displays and events, price discounts, and consumer coupons. The costs of these activities are generally recognized at the time the related revenue is recorded, which normally precedes the actual cash expenditure. The recognition of these costs therefore requires management judgment regarding the volume of promotional offers that will be redeemed by either the retail trade or consumer. Differences between estimated expense and actual redemptions are normally immaterial and recognized as a change in management estimate in a subsequent period. These estimates are made using various techniques including historical data on performance. *On a full-year basis, these subsequent period adjustments represent approximately 0.5% of our company's net sales*." (emphasis added)

Procter and Gamble 10-K, 2020

"Trade promotions, consisting primarily of customer pricing allowances, merchandising funds, and consumer coupons, are offered through various programs to customers and consumers. Sales are recorded net of trade promotion spending, which is recognized as incurred at the time of the sale. Most of these arrangements have terms of approximately one year. Accruals for expected payouts under these programs are included as accrued marketing and promotion in the Accrued and other liabilities line item in the Consolidated Balance Sheets."

APPENDIX B

VARIABLE DEFINITIONS

Variable Name	**Definition**
Dependent Variables	
Revenue	Total revenues.
Cost of Goods Sold	Total cost of goods sold.
Gross Profit	*Revenue* minus *Cost of Goods Sold.*
Gross Margin	*Gross Profit* divided by *Revenue*.
EPS	Actual reported earnings per share.
EPS Forecast Bias	Earnings forecast error, calculated as actual earnings per share minus the mean estimate of the most recent consensus analyst forecast, scaled by stock price.
Sales Forecast Bias	Sales forecast error, calculated as actual sales minus the mean estimate of the most recent consensus analyst forecast, scaled by stock price.
Miss	An indicator variable set equal to one for firm quarters where reported earnings (or sales) is less than the mean estimate of the most recent consensus analyst forecast, zero otherwise.
EA CAR	Market-adjusted cumulative abnormal returns for the three-day window surrounding firms' quarterly earnings announcement.
Independent Variables	
Coupon	The total dollar amount of coupons redeemed by customers in the Nielsen Household Panel for products of firm *i* in quarter *t*.
AbnCoupon	Seasonally adjusted value of *Coupon* (i.e., $Coupon_t$ minus $Coupon_{t-4}$).
High AbnCoupon	An indicator variable set equal to one for firm quarters whose value for *AbnCoupon* falls within the top quartile.
UE	Unexpected earnings, calculated as actual earnings per share minus the mean estimate of the most recent consensus analyst forecast prior to the earnings announcement date, scaled by stock price.
Size	The natural logarithm of total assets.
MB	The market to book ratio, calculated as market value of equity divided by book value of equity.
Leverage	Firm leverage, calculated as total liabilities divided by total assets.
Accruals	Absolute total accruals, calculated as the absolute value of net income minus operating cash flow, scaled by total assets.

Volatility	The standard deviation of income before extraordinary items scaled by total assets of firm *i* in quarters *t-8* to *t-1*.
Foreign	An indicator variable set equal to one if the firm *i* reports a foreign currency adjustment in quarter *t*.
Guidance	An indicator variable set equal to one if firm *i* issues earnings guidance in quarter *t*.
Analyst Following	The number of analysts issuing earnings forecasts for firm *i* during quarter *t*.

Table 1 – Industry Breakdown

Fama French 1: Consumer Nondurables		
SIC3	**Name**	**Frequency**
201	Meat Products	9.6%
203	Canned, Frozen, And Preserved Food	9.8%
204	Grain Mill Products	4.0%
205	Bakery Products	5.3%
206	Sugar And Confectionery Products	4.8%
208	Beverages	7.6%
209	Miscellaneous Food And Kindred	4.3%
211	Cigarettes	3.0%
230	Apparel And Fabrics	2.0%
	Total:	50.4%

Fama French 2-3: Consumer Durables and Other Manufacturing		
SIC3	**Name**	**Frequency**
262	Paper Mills	1.6%
263	Paperboard Mills	1.6%
267	Converted Paper And Paperboard Products, Except	2.1%
281	Industrial Inorganic Chemicals	0.7%
282	Plastics Materials And Synthetic Resins	1.6%
283	Drugs	12.9%
284	Soap, Detergents, And Cleaning Preparations	11.9%
285	Paints, Varnishes, Lacquers	1.6%
287	Agricultural Chemicals	1.6%
329	Abrasive, Asbestos, And Miscellaneous	1.6%
333	Primary Smelting	0.7%
342	Cutlery, Handtools, And General Hardware	1.6%
353	Construction, Mining, And Materials Handling	0.5%
354	Metalworking Machinery	1.6%
357	Computer And Office Equipment	0.6%
363	Household Appliances	1.9%
367	Electronic Components And Accessories	1.6%
369	Electrical Machinery, Equipment, and Supplies	0.7%
384	Surgical, Medical, And Dental Instruments And Supplies	1.6%
399	Miscellaneous Manufacturing Industries	1.6%
	Total:	49.6%

This table reports the frequency of three-digit SIC industry classification for the firms in the sample. Observations are categorized as operating in durable vs nondurable goods industries based on the Fama French 12 industry portfolios.

Table 2 – Descriptive Statistics

Variable	N	Mean	SD	p25	p50	p75
Revenue ($M)	2,796	3,629.05	4,509.20	499.45	1,615.50	5,287.34
COGS ($M)	2,796	1,645.26	2,004.92	287.42	864.53	2,220.50
Gross Profit ($M)	2,796	1,974.18	2,994.37	191.59	605.01	1,976.09
Gross Margin (%)	2,796	0.45	0.18	0.34	0.43	0.56
EPS	2,598	0.68	0.52	0.33	0.60	0.97
Sales Forecast Bias	2,594	-0.34	10.20	-0.75	0.05	0.50
EPS Forecast Bias	2,598	-0.00	0.10	-0.00	-0.00	-0.00
Miss Sales	2,796	0.41	0.49	0.00	0.00	1.00
Miss EPS	2,796	0.21	0.41	0.00	0.00	0.00
CAR	2,662	0.00	0.06	-0.03	0.00	0.03
Coupon ($100k)	2,796	0.13	0.24	0.01	0.04	0.16
Size	2,796	8.82	1.74	7.73	8.82	10.19
MB	2,796	5.22	10.69	1.97	3.20	5.59
Leverage	2,796	0.60	0.23	0.45	0.58	0.73
Accruals	2,796	0.00	0.02	-0.01	0.01	0.01
Volatility	2,796	0.03	0.03	0.01	0.02	0.03
Foreign	2,796	0.29	0.46	0.00	0.00	1.00
Guidance	2,796	0.20	0.40	0.00	0.00	0.00
Analyst Following	2,796	11.21	6.98	5.00	11.00	17.00

This table reports descriptive statistics for the sample used across the various regression analyses. All variables have been winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix B.

Table 3 – Correlation Matrix

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
[1]	*Rev*		**0.95**	**0.95**	**0.37**	**0.42**	**-0.06**	**-0.07**	**0.48**	**0.94**	**0.21**	**0.20**	0.01	**-0.17**	-0.01	0.02	**0.62**
[2]	*COGS*	**0.84**		**0.84**	**0.12**	**0.40**	**-0.04**	**-0.05**	**0.49**	**0.87**	**0.16**	**0.21**	0.02	**-0.23**	**-0.07**	0.00	**0.53**
[3]	*GP*	**0.94**	**0.61**		**0.58**	**0.46**	**-0.07**	**-0.08**	**0.47**	**0.94**	**0.29**	**0.23**	0.00	**-0.14**	-0.01	**0.06**	**0.68**
[4]	*GM*	**0.41**	0.00	**0.61**		**0.23**	**-0.09**	**-0.04**	**0.18**	**0.45**	**0.24**	**0.07**	-0.01	**0.11**	**0.13**	**0.07**	**0.42**
[5]	*EPS*	**0.27**	**0.21**	**0.26**	**0.19**		0.03	**-0.16**	**0.19**	**0.44**	**0.16**	**0.13**	-0.03	**-0.12**	0.00	-0.02	**0.29**
[6]	*Sales Bias*	-0.02	-0.00	-0.03	-0.01	**0.04**		**0.23**	0.02	**-0.05**	-0.01	**0.04**	-0.03	-0.01	-0.03	**-0.06**	-0.00
[7]	*EPS Bias*	-0.01	0.01	-0.01	**-0.06**	**-0.07**	**-0.58**		0.02	**-0.08**	**0.06**	-0.01	**-0.04**	**-0.11**	-0.02	-0.03	**-0.05**
[8]	*Coupon*	**0.49**	**0.54**	**0.39**	**0.07**	**0.13**	0.02	-0.01		**0.43**	**0.31**	**0.27**	0.00	**-0.23**	**-0.10**	**-0.05**	**0.37**
[9]	*Size*	**0.81**	**0.69**	**0.76**	**0.45**	**0.36**	-0.01	-0.01	**0.38**		**0.12**	**0.16**	**0.05**	**-0.20**	**-0.05**	0.01	**0.64**
[10]	*MB*	0.00	-0.01	0.00	**0.07**	**0.13**	-0.00	-0.01	**0.10**	0.03		**0.34**	-0.04	**0.04**	**-0.04**	**0.13**	**0.30**
[11]	*Leverage*	0.00	**0.04**	-0.03	**0.13**	**0.06**	-0.01	0.01	**0.10**	**0.13**	**0.18**		-0.02	**0.09**	**0.04**	-0.01	**0.21**
[12]	*Accruals*	0.03	0.03	0.02	0.01	-0.03	-0.00	**-0.06**	0.03	**0.06**	-0.02	0.00		**-0.06**	**-0.13**	-0.02	-0.01
[13]	*Volatility*	**-0.18**	**-0.18**	**-0.15**	0.03	**-0.18**	**-0.09**	**0.05**	**-0.16**	**-0.18**	-0.02	**0.15**	**-0.05**		**0.16**	**-0.05**	**-0.10**
[14]	*Foreign*	**-0.04**	**-0.08**	-0.01	**0.15**	-0.02	-0.03	0.03	**-0.14**	-0.03	-0.01	**0.11**	**-0.11**	**0.13**		**0.19**	0.00
[15]	*Guidance*	**-0.04**	-0.03	-0.04	**0.07**	0.00	-0.00	-0.01	0.01	0.01	-0.02	-0.03	0.00	**-0.05**	**0.19**		**0.14**
[16]	*Analyst*	**0.47**	**0.37**	**0.47**	**0.40**	**0.25**	0.02	-0.03	**0.29**	**0.64**	**0.12**	**0.14**	0.00	**-0.15**	0.00	**0.14**	

This table reports Pearson (Spearman) correlation coefficients below (above) the diagonal. Boldface denotes statistical significance at the 0.05 level.

Table 4 – Coupons and Current Period Performance

	(1) *Revenue*	(2) *COGS*	(3) *Gross Profit*	(4) Ln(*Revenue*)	(5) Ln(*COGS*)	(6) *Gross Margin*
Coupon	1600.139**	896.996***	793.138**	0.175*	0.212**	-0.022**
	(2.43)	(2.94)	(2.07)	(1.86)	(2.24)	(-2.08)
Size	957.927***	439.548***	518.854***	0.726***	0.734***	-0.004
	(3.37)	(2.94)	(3.53)	(12.37)	(11.49)	(-0.46)
MB	-3.909	-0.966	-2.776	0.001**	0.001***	-0.000
	(-1.66)	(-1.09)	(-1.39)	(2.16)	(3.06)	(-0.03)
Leverage	1102.204	391.926	664.111	0.228	0.397**	-0.059***
	(1.22)	(0.87)	(1.35)	(1.47)	(2.37)	(-2.95)
Accruals	-1092.094	-380.276	-620.468	-0.836**	-0.738*	-0.036
	(-1.38)	(-0.90)	(-1.41)	(-2.15)	(-1.91)	(-0.80)
Volatility	-893.117	9.662	-838.013	-0.061	-0.015	-0.071
	(-0.56)	(0.01)	(-0.86)	(-0.13)	(-0.03)	(-0.89)
Foreign	38.567	51.212	-6.632	0.043	0.039	-0.003
	(0.23)	(0.56)	(-0.07)	(1.28)	(1.08)	(-0.71)
Guidance	-87.780	-44.377	-37.590	0.008	-0.004	0.006
	(-0.89)	(-1.04)	(-0.56)	(0.50)	(-0.19)	(1.45)
Analyst Following	5.352	1.771	4.250	0.001	-0.002	0.001*
	(0.35)	(0.24)	(0.43)	(0.42)	(-0.67)	(1.88)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
N	2,795	2,795	2,795	2,795	2,795	2,795
adj. R-sq	0.958	0.953	0.966	0.984	0.979	0.967

This table reports OLS regressions of various performance measures on couponing activity (*Coupon*) and control variables. All continuous variables have been winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix B. Fixed effects are included for each firm and year-quarter in the sample. T-statistics, calculated using robust standard errors clustered by firm, are presented below the coefficient estimates. Two-tailed significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively.

Table 5 – Coupons and the Persistence of Earnings

	(1) ΔEPS_{t+1}	(2) ΔEPS_{t+1}	(3) ΔEPS_{t+1}	(4) ΔEPS_{t+1}
ΔEPS_t	0.526***	0.423***	0.509***	0.490***
	(10.71)	(7.00)	(6.98)	(9.13)
$Coupon_t$	-0.004	-0.007	0.008	-0.081***
	(-0.32)	(-0.54)	(0.35)	(-3.16)
$\Delta EPS_t \times Coupon_t$	-0.460***	-0.572***	-0.406*	-0.494***
	(-3.10)	(-4.22)	(-1.74)	(-2.94)
$Size_t$	-0.000	-0.007	0.008*	-0.011
	(-0.07)	(-1.41)	(1.82)	(-0.59)
$\Delta EPS_t \times Size_t$	0.025	0.124***	-0.075**	0.028
	(0.73)	(4.02)	(-2.10)	(0.77)
MB_t	-0.000	-0.000	-0.000	0.000
	(-0.58)	(-0.92)	(-0.51)	(0.36)
$\Delta EPS_t \times MB_t$	0.005	0.006*	0.009	0.004
	(1.54)	(1.79)	(1.11)	(1.38)
$Leverage_t$	0.048***	0.050*	0.001	0.112**
	(3.85)	(1.82)	(0.04)	(2.02)
$\Delta EPS_t \times Leverage_t$	-0.142	0.070	0.007	-0.109
	(-1.29)	(0.74)	(0.02)	(-0.97)
$Accruals_t$	-0.324	-0.190	-0.188	-0.502
	(-0.92)	(-0.35)	(-0.67)	(-1.28)
$\Delta EPS_t \times Accruals_t$	-3.067*	-3.831*	-1.347	-3.060*
	(-1.70)	(-1.97)	(-0.81)	(-1.75)
$Volatility_t$	0.111	-0.021	0.300	0.222
	(0.89)	(-0.17)	(1.03)	(1.05)
$\Delta EPS_t \times Volatility_t$	-0.226	0.799	-0.929	-0.264
	(-0.24)	(0.52)	(-0.79)	(-0.26)
Sample	Full	Durables	Nondurables	Full
Industry FE	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	No
Firm FE	No	No	No	Yes
Year-quarter FE	No	No	No	Yes
N	2,069	1,041	1,028	2,069
adj. R-sq	0.282	0.288	0.322	0.288

This table reports tests of differences in the persistence earnings based on couponing activity (*Coupon*) and control variables. All variables have been winsorized at the 1st and 99th percentiles. Significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively. One-tailed significance is reported for coefficients with a hypothesized direction, two-tailed otherwise.

Table 6 – Coupons and the Persistence of the Antecedents of Earnings

	(1)	(2)	(3)	(4)	(5)	(6)
DV: ΔPerformance$_{t+1}$	*Revenue*	*Revenue*	*COGS*	*COGS*	*Gross Profit*	*Gross Profit*
ΔPerformance$_t$	0.714***	0.655***	0.667***	0.612***	0.629***	0.595***
	(22.02)	(20.92)	(19.83)	(18.98)	(21.78)	(20.73)
Coupon$_t$	-0.018***	-0.023	-0.024***	-0.037	-0.022**	-0.037
	(-3.38)	(-1.07)	(-2.67)	(-1.32)	(-2.63)	(-1.36)
ΔPerformance$_t$ × *Coupon$_t$*	-0.198*	-0.218*	-0.253**	-0.274**	-0.265**	-0.261**
	(-1.62)	(-1.66)	(-2.55)	(-2.55)	(-2.49)	(-2.36)
Controls$_t$ and *ΔPerformance$_t$* × Controls$_t$	Included	Included	Included	Included	Included	Included
Industry FE	Yes	No	Yes	No	Yes	No
Year FE	Yes	No	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes	No	Yes
Year-quarter FE	No	Yes	No	Yes	No	Yes
N	2,301	2,301	2,301	2,301	2,301	2,301
adj. R-sq	0.544	0.551	0.508	0.517	0.448	0.450

This table reports tests of differences in the persistence of revenues, cost of goods sold, and gross profit based on couponing activity (*Coupon*) and control variables. All variables have been winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix B. Fixed effects are included for each firm and year in the sample. T-statistics, calculated using robust standard errors clustered by firm, are presented below the coefficient estimates. Significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively. One-tailed significance is reported for coefficients with a hypothesized direction, two-tailed otherwise.

Table 7 – Coupons and Analyst Forecasts

Panel A: Forecast bias				
	(1)	(2)	(3)	(4)
DV: *Forecast Bias*$_{t+1}$	*EPS*$_{t+1}$	*Sales*$_{t+1}$	*EPS*$_{t+1}$	*Sales*$_{t+1}$
Coupon$_t$	0.002**	1.662*		
	(1.98)	(1.86)		
AbnCoupon$_t$			0.001*	0.994
			(1.80)	(0.57)
Size$_t$	0.000	-0.291	0.000	-0.355
	(1.20)	(-1.20)	(1.36)	(-1.35)
MB$_t$	0.000	-0.007	0.000	-0.004
	(1.19)	(-1.32)	(1.03)	(-0.90)
Leverage$_t$	0.001	0.443	0.001	1.007
	(0.72)	(0.60)	(0.53)	(1.41)
Accruals$_t$	0.001	-8.270	0.004	-10.186
	(0.19)	(-1.39)	(0.56)	(-1.41)
Volatility$_t$	-0.010*	2.676	-0.014*	2.941
	(-1.67)	(0.42)	(-1.94)	(0.39)
Foreign$_t$	-0.000	-0.102	-0.000	-0.006
	(-1.59)	(-0.43)	(-1.40)	(-0.02)
Guidance$_t$	-0.000	0.090	-0.000	0.086
	(-1.24)	(0.35)	(-1.24)	(0.27)
Analyst Following$_t$	0.000	0.030	0.000	0.034
	(1.19)	(0.76)	(1.29)	(0.77)
Firm FE	Yes	Yes	Yes	Yes
Year-quarter FE	Yes	Yes	Yes	Yes
N	2,480	2,480	2,144	2,144
adj. R-sq	0.058	0.039	0.055	0.029

Table 7 (continued)

Panel B: Meet or beat likelihood

	(1)	(2)	(3)	(4)
DV: $Miss_{t+1}$	EPS_{t+1}	$Sales_{t+1}$	EPS_{t+1}	$Sales_{t+1}$
$Coupon_t$	0.243***	0.239*	2.074***	1.498***
	(3.26)	(1.94)	(3.02)	(3.19)
$Size_t$	0.010	0.011	0.068	0.016
	(0.37)	(0.34)	(0.36)	(0.11)
MB_t	0.001	0.001	0.008	0.005
	(0.95)	(1.33)	(0.98)	(1.22)
$Leverage_t$	-0.045	-0.104	-0.386	-0.482
	(-0.39)	(-0.77)	(-0.52)	(-0.76)
$Accruals_t$	0.416	0.056	1.137	-2.532
	(0.72)	(0.13)	(0.36)	(-1.21)
$Volatility_t$	-0.018	0.643**	-0.096	2.962**
	(-0.05)	(2.03)	(-0.05)	(2.27)
$Foreign_t$	-0.003	-0.050*	-0.120	-0.318***
	(-0.07)	(-1.79)	(-0.55)	(-2.62)
$Guidance_t$	-0.047*	-0.011	-0.322*	0.000
	(-1.95)	(-0.38)	(-1.73)	(0.00)
Analyst Following$_t$	0.002	0.013***	0.018	0.056***
	(0.70)	(3.55)	(0.74)	(3.40)
Model	OLS	OLS	Conditional Logit	Conditional Logit
Firm FE	Yes	Yes	Yes	Yes
Year-quarter FE	Yes	Yes	Yes	Yes
N	2,480	2,480	2,666	2,476
adj. (Psuedo) R-sq	0.091	0.103	(0.029)	(0.050)

This table reports results of tests relating to couponing activity and analyst forecasts of future performance. In Panel A, the dependent variable, $ForecastBias_{t+1}$, denotes the forecast bias of either earnings per share (Columns 1 and 3) or sales (Columns 2 and 4) and is regressed on firms' couponing activity (*Coupon*) or seasonally differenced couponing activity (*AbnCoupon*). In Panel B, an indicator variable denoting observations where the firm missed earnings/sales expectations is regressed on couponing activity (*Coupon*) using a linear probability model (Columns 1-2) or a conditional logistic model (Columns 3-4). All continuous variables have been winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix B. Fixed effects are included for each firm and year-quarter in the sample. T-statistics, calculated using robust standard errors clustered by firm, are presented below the coefficient estimates. Two-tailed significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively.

Table 8 – Coupons and Contemporaneous Earnings Response Coefficients

	(1) *EA CAR$_t$*	(2) *EA CAR$_t$*	(3) *EA CAR$_t$*	(4) *EA CAR$_t$*
UE$_t$	5.493***	5.827***	5.267***	5.280***
	(5.46)	(5.53)	(4.99)	(4.74)
Coupon$_t$		-0.008		
		(-1.12)		
UE$_t$ × Coupon$_t$		4.293		
		(0.64)		
AbnCoupon$_t$			-0.020	
			(-1.03)	
UE$_t$ × AbnCoupon$_t$			-1.907	
			(-0.09)	
High AbnCoupon$_t$				-0.007*
				(-1.97)
UE$_t$ × High AbnCoupon$_t$				-0.090
				(-0.09)
Size$_t$	0.003	0.002	0.000	0.000
	(0.72)	(0.66)	(0.11)	(0.12)
MB$_t$	-0.000	-0.000	-0.000	-0.000
	(-0.73)	(-0.73)	(-0.80)	(-0.66)
Leverage$_t$	0.009	0.008	0.011	0.011
	(0.56)	(0.54)	(0.62)	(0.57)
Accruals$_t$	0.079	0.083	0.085	0.089
	(1.06)	(1.11)	(0.99)	(1.05)
Volatility$_t$	0.003	0.003	-0.071	-0.070
	(0.05)	(0.06)	(-1.29)	(-1.30)
Foreign$_t$	-0.004	-0.004	-0.005	-0.005
	(-1.06)	(-1.07)	(-1.10)	(-1.20)
Guidance$_t$	-0.003	-0.002	-0.003	-0.003
	(-0.83)	(-0.79)	(-0.78)	(-0.78)
Analyst Following$_t$	-0.000	-0.000	-0.001	-0.001
	(-0.94)	(-0.96)	(-1.16)	(-1.13)
Firm FE	Yes	Yes	Yes	Yes
Year-quarter FE	Yes	Yes	Yes	Yes
N	2,508	2,508	2,177	2,177
adj. R-sq	0.093	0.093	0.084	0.085

This table reports results of tests relating to couponing activity and contemporaneous earnings response coefficients. All continuous variables have been winsorized at the 1st and 99th percentiles. Two-tailed significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively.

Table 9 – Coupons and Future Earnings Announcement Abnormal Returns

Panel A: Multivariate analysis				
	(1)	(2)	(3)	(4)
	EA CAR$_{t+1}$	*EA CAR$_{t+1}$*	*EA CAR$_{t+1}$*	*EA CAR$_{t+1}$*
UE$_{t+1}$	5.435***	5.436***	5.210***	5.228***
	(5.54)	(5.54)	(5.35)	(5.47)
Coupon$_t$		0.001		
		(0.18)		
AbnCoupon$_t$			-0.032*	
			(-1.72)	
High AbnCoupon$_t$				-0.008**
				(-2.15)
Size$_t$	0.003	0.003	0.000	0.000
	(0.71)	(0.70)	(0.00)	(0.01)
MB$_t$	-0.000	-0.000	-0.000	-0.000
	(-1.20)	(-1.21)	(-1.38)	(-1.27)
Leverage$_t$	0.010	0.010	0.011	0.010
	(0.67)	(0.67)	(0.57)	(0.53)
Accruals$_t$	0.019	0.019	0.061	0.066
	(0.20)	(0.20)	(0.60)	(0.64)
Volatility$_t$	0.027	0.027	-0.051	-0.050
	(0.60)	(0.59)	(-0.83)	(-0.81)
Foreign$_t$	-0.005	-0.005	-0.006	-0.007
	(-1.23)	(-1.22)	(-1.29)	(-1.35)
Guidance$_t$	0.001	0.001	0.001	0.001
	(0.23)	(0.23)	(0.24)	(0.22)
Analyst Following$_t$	-0.001	-0.001	-0.001	-0.001
	(-1.37)	(-1.37)	(-1.39)	(-1.33)
Firm FE	Yes	Yes	Yes	Yes
Year-quarter FE	Yes	Yes	Yes	Yes
N	2,398	2,398	2,072	2,072
adj. R-sq	0.092	0.091	0.079	0.081

Table 9 (continued)

Panel B: Trading strategy based on quartiles of *AbnCoupon*$_t$ (full sample)					
	Low-High	Low (1)	(2)	(3)	High (4)
N	1,231	616	615	615	615
Mean(*EA CAR*$_{t+1}$)	0.48%*	0.15%	0.14%	0.10%	-0.32%
(T-statistic)	(1.74)	(0.67)	(0.63)	(0.41)	(1.46)

Panel C: Trading strategy based on quartiles of *AbnCoupon*$_t$ (durables sample)					
	Low-High	Low (1)	(2)	(3)	High (4)
N	574	265	365	337	309
Mean(*EA CAR*$_{t+1}$)	1.45%***	0.75%**	0.17%	0.09%	-0.69%**
(T-statistic)	(3.05)	(2.07)	(0.53)	(0.32)	(2.24)

This table reports tests of the association between couponing activity and the earnings announcement abnormal returns corresponding to subsequent fiscal quarters (*EA CAR*$_{t+1}$). In Panel A, returns are regressed on the unexpected earnings of the quarter t+1 (*UE*$_{t+1}$) and couponing activity in quarter t. In Panel B, mean abnormal returns are tabulated for portfolios constructed as quarterly sorts of quartiles for *AbnCoupon*. Panel C presents the abnormal returns for the subsample of observations that correspond to durable goods firms. All variables have been winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix B. Fixed effects are included for each firm and year-quarter in the sample. T-statistics, calculated using robust standard errors clustered by firm, are presented below the coefficient estimates. Significance at the 0.10, 0.05, and 0.01 levels is denoted by *, **, and ***, respectively.