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### **Managing Mail-in Rebate Promotions**

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## **Managing Mail-in Rebate Promotions**

Despite the attention mail-in rebate promotions have received in the business news and popular press, research on consumer responses to mail-in rebates is limited. This article discusses managerial insights that can be gained by examining the influence of mail-in rebate characteristics on purchase behavior and redemption rates. We present data on industry practice, review behavioral literatures that can comment on the appropriateness of industry practice, and highlight differences between industry practice and the predictions of behavioral theory. This article should provide insight into how to manage rebate promotions and how to develop tests of consumer sensitivity to changes in rebate offer characteristics.

Manufacturers and retailers have a long history of using promotional tactics to increase unit sales and discriminate among consumers who vary in their price sensitivity. Mail-in rebates (hereafter rebates) are among the most popular of these tactics. Rebates offer consumers an opportunity to receive a monetary reward for buying a promoted product, provided they expend some effort to receive the reward (Jolson, Weiner, and Rosecky 1987; Rothschild 1987; Tat, Cunningham, and Babakus 1988). Rebates are distinct from coupons because the effort required to obtain the cost savings and the receipt of the cost savings both occur after rather than at or before purchase. Next to coupons, rebates are the most popular promotion tactic used by consumer goods companies (Bowman 1989) and are the most common promotion strategy used by technology retailers (Lanctot 2002). Rebates are popular because they can be used to achieve key price points and drive demand, while limiting the number of consumers that purchase at the discounted price (Lanctot 2002). As explained by one retailer, “Manufacturers love rebates because redemption rates are close to none. They get people into stores, but when it comes time to collect, few people follow through. And this is just what the manufacturer has in mind” (Greenman 1999).

Despite the attention rebates have received in the business news and popular press (e.g., McGinn 2003; McLaughlin 2002), research on consumer responses to rebate offers is limited. Most rebate research has relied on consumer surveys and economic models to address issues other than the tradeoff between increased demand and redemption rates. For example, rebate research has examined optimum rebate reward amounts (Ali, Jolson, and Darmon 1994), consumer perceptions of manufacturers’ motives for offering rebates (Avila, Chapman, and Avila 1989; Tat et al. 1988), consumer attributions of satisfaction with rebate shopping experiences (Hunt and Keaveney 1992; Hunt, Keaveney, and Lee 1995), consumer perceptions

of the redemption process (Jolson et al. 1987; Tat et al. 1988), and consumer motives toward rebate redemption (Tat 1994; Tat and Schwegler 1998). What is missing is a program of research that addresses the net effectiveness of a rebate offer. More specifically, how do characteristics of a rebate offer influence the propensity of the consumer to purchase the product and the likelihood that the consumer will redeem the rebate?

This paper attempts to address this gap in the rebate literature by discussing managerial insights that can be gained by examining the behavioral literature pertinent to rebate-induced purchases and rebate redemption. We organize the paper into five sections: *measurement issues*, *the value of the reward*, *the effort to redeem*, *length of the redemption deadline*, and *interactions among rebate offer characteristics*. Within each section, we discuss industry practice, review behavioral theory if available, and generate recommendations / hypotheses based on behavioral theory. Our recommendations and hypotheses focus on both increasing incremental sales and controlling redemption rates. Thus, they provide a foundation for future research on rebate offer effectiveness.

## **INDUSTRY PRACTICE**

We gathered information on industry practice from three different sources. First, we collected data from the trade and academic press. Second, we conducted personal interviews with program managers at rebate fulfillment businesses, with marketing managers in firms that promote products using rebates, and with representatives of trade organizations that act as clearing houses for information about rebate promotion effectiveness. Third, we contacted 50 fulfillment centers registered with a leading industry association and requested data on a recently completed rebate promotion as well as responses to questionnaire items. We received 35 responses, representing a response rate of 70% and a cross-section of product categories. Table 1

presents a summary of the survey responses. These responses are used to introduce each issue in this article.

## **MEASUREMENT ISSUES**

### **Industry Practice**

An assessment of the effectiveness of a rebate program relies on a multitude of metrics that measure consumer responses to a rebate offer. As shown in Table 1, the most popular assessment metrics are the redemption rate on total sales (51.4%), the redemption rate on circulated offers (51.4%), and incremental unit sales (45.7%). Personal interviews provided insight into how these metrics are used. We found that many managers organize their knowledge about effective rebate promotions by establishing norms for redemption rates on total sales at various price points or in various product categories. For example, promotion managers informed us that redemption rates tend to be “very low” when the reward is below \$10, that rebates of \$10 to \$20 on a \$100 software product range between 10% and 30%, and that redemption rates on consumer electronics average approximately 40%. Follow-up discussions with managers and industry representatives revealed that promotions are deemed successful when they achieve incremental sales targets without exceeding the expected redemption rate on total sales. The expected redemption rate is based on the results of previous, similar promotions. In short, changes in redemption rates on total sales often guide managerial decision making and the development of best practices.

### **Background**

One needs to consider the types of people that might purchase a rebate-promoted product when attempting to identify the best metric for assessing the effectiveness of a rebate promotion. We propose that purchasers can be classified into *rebate-independent purchasers* (i.e., baseline sales that occur even when the rebate is absent) and *rebate-dependent purchasers* (i.e., incremental sales that occur due to the presence of the rebate) at the time of purchase.<sup>4</sup> Rebate-independent purchasers can be further segmented into purchasers that have no intention to redeem the rebate (i.e., *intended non-redeemers*) and purchasers that may take advantage of the rebate because the opportunity has become available (i.e., *opportunistic redeemers*). Rebate-dependent purchasers can be further segmented into purchasers that estimate the probability of redeeming is sufficient to merit the purchase (i.e., *probabilistic redeemers*) and purchasers that are certain of their redemption intention (i.e., *intended redeemers* that estimate their probability of redemption is 100%).<sup>5</sup> We note that opportunistic redeemers can be probabilistic or certain of their redemption intentions at purchase, but that this classification is not meaningful because these people will purchase the product with or without the rebate offer. In contrast, classifying rebate-dependent purchasers as probabilistic or intended is meaningful because this orientation at purchase moderates the consumer's response to the rebate offer. We also assume that a buyer's orientation at purchase does not dictate his / her redemption behavior (i.e., people may fail to redeem despite their intention to do so).

Our classification suggests better metrics for learning about the effectiveness rebate promotions: incremental sales, the redemption rate by rebate-dependent purchasers, and the redemption rate among rebate-independent purchasers (i.e., opportunistic redemption). We illustrate the advantage of these metrics in Figure 1. Figure 1 shows three rebate offers (e.g., A,

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<sup>4</sup> For simplicity, assume each purchaser purchases a single product.

<sup>5</sup> We thank an anonymous reviewer for raising the distinction between probabilistic and intended redeemers.

B, and C) that have an equivalent strike price (i.e., equivalent price after rebate) but differ in other offer characteristics (e.g., rebate amount, difficulty of redemption, length of redemption deadline). For each offer, we have segmented buyers using the proposed classification scheme and provided redemption response rates for each segment. The example shows that the three offers generate incremental sales of 25%, 67%, and 150% as a percentage of existing base sales, and exhibit redemption rates on total sales of 30%, 30%, and 40% respectively. Using the redemption rate on total sales as the primary metric for performance, offer C is least desirable due to its high redemption rate, while offers A and B are equally desirable because they yield equivalent redemption rates. Yet, these conclusions are incorrect. Offer C is most desirable promotion because it contributes the highest proportion of incremental sales, exhibits the lowest redemption rate among rebate-dependent purchasers, and does not encourage opportunistic redemption among rebate-independent purchasers (note that opportunistic redemption is undesirable since it requires the payment of rebate rewards to non-incremental buyers). Similarly, offer B is more desirable than offer A because it has a more advantageous redemption rate among rebate-dependent purchasers and does not encourage opportunistic redemptions.

### **Recommendation**

In an ideal world, a manager would be able to monitor redemptions by opportunistic redeemers and rebate-dependent purchasers so as to learn how to discourage the former and encourage the later. Unfortunately, most firms do not have access to this level of specificity in their redemption data. Still, most firms are able to estimate the incremental sales owing to a rebate promotion. As such, a metric of *redemptions / incremental sales* can be computed. Although this metric includes opportunistic redemptions in the numerator, it is still a more

diagnostic metric than the redemption rate on total sales.<sup>6</sup> The redemption rate on incremental sales allows a manager to quickly determine whether the number of redemptions is less than (i.e., a proportion < 1), equal to (i.e., a proportion = 1), or greater than (i.e., a proportion > 1) incremental sales. This type of information would be particularly useful to a manager that is trying to track the impact of offer characteristics across a series of rebate promotions.

The redemption rate on incremental sales also makes the financial evaluation of the promotion easy (i.e.,  $[\text{Incremental Sales} * \text{Unit Contribution}] - [\text{Redemptions} * \text{Reward Amount}] - \text{Fixed Cost of Promotion}$ ). Even in cases where a manager lacks detailed financial information, a redemption rate on incremental sales that is greater than 1 means that there are more redeemers than incremental purchasers. This problem was apparent in the data provided by our sample of firms, where the redemption rate on incremental sales ranged from a low of 9.6% to a high of 225.3% for the small number of firms that used this metric. The redemption rate on total sales for the same offers ranged from a low of 1.1% to a high of 40.7%, demonstrating that the redemption rate on total sales can be a non-diagnostic and misleading metric.

## **MANAGING REBATE OFFERS**

Managers of rebate promotions use the relative value of the rebate (as a percentage of the list price), the absolute value of the rebate (assuming a constant strike price), the amount of redemption effort, and the length of the redemption deadline (i.e., the number of days consumers have to redeem the rebate) to encourage incremental purchases without encouraging opportunistic redemption. Successful rebate promotions are also designed to limit the number of

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<sup>6</sup> We also note that only 28.6% of respondents reported using the redemption rate on incremental sales metric, and only 20% of respondents reported incremental sales data when providing us with data on a recent rebate promotion.

rebate-dependent purchasers that attempt to redeem a rebate offer (i.e., allow for breakage<sup>7</sup>).

These two themes are apparent in the managers' responses to survey questions about the source of redemption applications and of non-redemption behavior. Managers estimated that 47.9% of their redemption applications came from opportunistic redeemers, whereas only 52.1% of their redemption applications came from rebate-dependent purchasers. Managers also estimated that non-redemption is driven primarily by rebate-dependent purchasers that fail to redeem (63.5%), with intended non-redeemers accounting for only 36.5% of non-redemptions.

### **Value of the Reward**

*Industry Practice.* There are two ways to calculate the value of a reward. The first method involves the reward as a percentage of the list price (i.e., the rebate discount percentage). As one might expect, managers agree that increasing the discount percentage (e.g., increasing a rebate amount from \$20 to \$40 on a \$120 list price) will increase sales (97.1%) and increase the redemption rate (88.6%). In fact, large percentage rebates are generally avoided owing to documented cases of adverse outcomes. For example, when digital scanner manufacturers offered large percentage rebates, approximately 60% of the firms went bankrupt owing to abnormally high redemption rates (McLaughlin, 2002). Similarly, numerous other firms, including Microsoft, have discontinued large percentage rebates after finding them too costly (*New York Times* 2001).

The second method of defining reward amount involves a reward of different absolute values, but with a constant strike price (i.e., the absolute value of the reward). Managers believe that increasing the absolute value of the reward (e.g., a \$20 rebate on \$120 versus a \$40 rebate on \$140) will increase sales (100%) and increase the redemption rate (88.6%). There is less

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<sup>7</sup> Breakage is the industry term for rebate-triggered (i.e., rebate-dependent) purchasers that fail to redeem the rebate.

anecdotal evidence to support these beliefs. We now consider two literatures that can inform managers about the potential effects of manipulating the rebate discount percentage and the absolute value of the reward at a constant strike price.

*Purchase / Redemption Segregation.* Soman (1998) proposes that the decision to purchase a product can be independent of the decision to redeem an incentive and that this may be the case with rebates. Soman observes that a rebate offer consists of a benefit (i.e., the reward) and a cost (i.e., the redemption effort), and that people will treat these two aspects of the offer independently. Soman argues that the reward will be salient in the present and will be immediately deducted from the price, whereas the redemption effort will be perceived as a distant act and, therefore, will be discounted. Subsequently, when it is time to redeem the rebate, the redemption effort becomes more prominent. In effect, initiating the redemption process encourages people to reframe the rebate amount as a payment for the redemption effort and assess whether the pay is sufficient for the effort. Restated in terms of the segmentation analysis presented in Figure 1, the segregation perspective suggests that the amount of a rebate offer should have its greatest impact on intended redeemers, as these people are most likely to deduct the full amount of the rebate from the purchase price. However, the rebate amount should influence all types of redeemers at the time of redemption.

*Subjective Confidence and Optimistic Bias.* Researchers in psychology have repeatedly demonstrated that people's subjective probability (i.e., confidence) estimates of performing future actions can be manipulated with little impact on the likelihood of actually performing the actions (e.g., Griffin, Dunning, and Ross 1990; Hoch 1985; Vallone, Griffin, Lin, and Ross 1990). For example, Vallone et al. (1990) examined predictions for a wide variety of personal plans (e.g., leisure activities, academic activities, career planning) and found predictions that

elicited subjective confidence estimates of 50%-69% resulted in a mean performance rate (i.e., base rate) of 56%, while predictions that elicited substantially higher subjective confidence estimates of 70%-89% resulted in only a slightly higher mean performance rate of 63%. In short, research on overconfidence in personal forecasts has demonstrated that encouraging higher confidence estimates often has no appreciable impact on whether people actually perform the predicted behavior.

One of the most reliable effects in the overconfidence literature is that people are overconfident when making personal forecasts about behaviors involving desirable outcomes (e.g., Hoch 1985; Pulford and Colman 1996; Vallone et al. 1990). It is hypothesized that the “wishful thinking” evoked by an optimistic bias interferes with a person’s ability to consider factors that could interfere with achieving the desired outcome. With regard to rebate-dependent purchasers, an optimistic bias may generate excessive confidence regarding the likelihood of redeeming the rebate as a function of the attractiveness of the rebate offer. Restated in terms of the segmentation analysis presented in Figure 1, this analysis assumes that rebates will have their greatest impact on probabilistic redeemers. Probabilistic redeemers calculate an expected value of the rebate (i.e., the subjective probability of redemption multiplied by the rebate amount). For these purchasers, changing the subjective probability (i.e., confidence) of redeeming may be an effective means of encouraging a rebate-dependent purchase.

*Predictions.* As mentioned earlier, reward amounts can vary as a percentage discount on the list price or as a change in absolute value of the reward at a constant strike price. Soman’s (1998) discussion of purchase and redemption segregation suggests that only changes in the discount percentage have the potential to be beneficial since people will deduct the rebate amount from the list price (i.e., it is the strike price that drives purchase behavior, so increasing

the absolute size of the reward at a constant strike price will not increase the number of purchases). If this is so, reward values should be managed to minimize the strike price. In summary, increasing the discount percentage of a reward will increase sales to intended and probabilistic redeemers (see H<sub>S</sub>1a in Table 2). The only caveat is that larger discount percentages will result in larger discount amounts, which will then influence the willingness of all segments (including opportunistic redeemers) to redeem the rebate (H<sub>R</sub>1a in Table 2). In other words, there is a tradeoff between the benefit of increased sales from a larger discount percentage and the cost of higher redemption rates. These predictions, and all subsequent predictions, are summarized in Table 2.

With regard to the impact of an increase in the absolute value of the reward at a constant strike price, the segregation perspective predicts a negative net impact. There will be no influence of an increase in the absolute reward on intended redeemers because the strike price is constant. There will be a negative influence of an increase in the absolute reward among probabilistic redeemers because the reward amount is adjusted by a probability of less than one, thus the expected strike price increases (H<sub>S</sub>2a).<sup>8</sup> Yet, increases in the absolute reward amount will increase the likelihood of redemption by all segments (H<sub>R</sub>2a). In short, the segregation perspective implies a loss in profit when the absolute value of a reward is increased at a constant strike price (H<sub>P</sub>2a).

The overconfidence literature also makes predictions about the effectiveness of reward amounts that vary in discount percentage or in absolute value at a constant strike price. An optimistic bias predicts that people will become more confident of redeeming, and will be more likely to purchase, as the size of a reward increases relative to the list price (H<sub>S</sub>1b). An optimistic

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<sup>8</sup> For example, consider rewards of \$20 and \$40 at a constant strike price of \$100. The expected strike price for a probabilistic redeemer with a 70% probability of redeeming is \$106 when the reward is \$20 ( $\$120 - (.7 \times \$20) = \$106$ ), and \$112 when the reward is \$40 ( $\$140 - (.7 \times \$40) = \$112$ ).

bias also predicts an increase in the reward at a constant strike price will increase confidence and the likelihood of purchase. In this later case, it is likely that an optimistic bias will only exert its influence when a sole item is being considered for purchase, as past demonstrations of an optimistic bias have always involved isolated behaviors (H<sub>S</sub>2b). Thus, it may be the case that there is no increase in incremental sales owing to an increase in the reward at a constant strike price when people are comparing purchase alternatives in a choice task, but a positive increase in incremental sales owing to an increase in the reward at a constant strike price when people are judging whether or not to purchase an offer in isolation. With respect to redemptions, the overconfidence literature predicts that contextual factors that increase confidence do not necessarily lead to an increased incidence of behavior (H<sub>R</sub>2b). If increasing the consumer's confidence of a successful redemption increases the probability of a purchase but not the probability of a redemption, then the profitability of the promotion could increase (H<sub>p</sub>2b).

There is one final prediction associated with the perceived value of the reward. Research on value discounting has established that people often apply discount rates which diminish the perceived value of future payments (see Frederick, Loewenstein, and O'Donoghue 2002 for a review). The implication of this research is that a rebate check that is promised to arrive in 2-4 weeks after a redemption application submission will be perceived as more valuable than a redemption check that is promised to arrive in 4-8 weeks after the submission. Thus, firms may be able to encourage reward discounting and breakage by actively managing the timing of reward payments (H<sub>R</sub>3a).

### **Redemption Effort**

*Industry Practice.* There is some disagreement among managers concerning the influence of increasing the rebate redemption effort on sales and redemption rates. The majority of

managers (65.7%) report that increasing redemption effort decreases sales, with some managers claiming no change (22.9%), and some managers claiming an increase in sales (11.4%). The majority of managers (62.1%) report that increasing redemption effort reduces the redemption rate, with some managers claiming no change (20.7%), and some claiming an increase in the redemption rate (17.2%).

The academic literature and business press support the majority view that the effort and the complexity of the redemption task discourages consumers from redeeming rebate offers (Jolson et al. 1987; McLaughlin 2002; Norr 2000; Shim 2002; Soman 1998; Spencer 2002). Effort and complexity have been shown to lower redemption rates in three ways: (1) by causing consumers to give up before completing the redemption application, (2) by preventing redemption when consumers make simple errors such as discarding the bar code or the sales receipt, and (3) by resulting in rejected redemption requests when consumers fail to follow redemption instructions. Issuing firms understand that increasing the effort required to redeem a rebate results in lower redemption rates. As stated by Federal Trade Commission Director J. Howard Beals, “Some companies are quick to offer attractive rebates, but often make them so difficult to redeem that consumers simply give up” (Shim 2002). As explained by a former marketing consultant, “If you have to take a knife and cut through heavy cardboard to get a bar code, the rates drop precipitously” (Norr 2000).

*Predictions.* Based on the academic literature and the business press, it is likely that increasing the effort required to redeem a rebate offer will decrease sales to probabilistic redeemers (H<sub>S</sub>4a) and decrease redemption rates for all segments of redeemers (H<sub>R</sub>4a).

### **Redemption Deadline**

*Industry Practice.* There is some disagreement among managers concerning the influence

of increasing the length of the redemption deadline on sales and redemption rates. Managers were split in their opinion that increasing the length of the redemption deadline increases sales (40%) or has no influence on sales (57.1%). There was somewhat more agreement that lengthening the deadline would increase redemption rates (60%), although a significant proportion of managers (37.1%) felt that lengthening the deadline would have no influence on redemption rates. Interestingly, only 2.8% of managers felt that lengthening the redemption deadline would result in lower redemption rates.

Industry trends for deadline length are consistent with the majority view expressed among the managers. In the early 1980's, Manufacturer's Marketing Services recommended expiration dates of six months for offers made on point-of-purchase materials, and one year for on-pack offers (Schultz and Robinson 1982, p. 143). Today, 30-day, 14-day, and even 7-day redemption deadlines are common. For example, we collected a random sample of 315 rebate offers featured at [wheresmyrebate.com](http://wheresmyrebate.com) and found that roughly 60% of offers had redemption deadlines of 14 days and roughly 38% of offers had redemption deadlines of 30 days. Managers tell us that quicker execution in launching promotions, and the desire to complete and evaluate promotions in a timely manner, are the forces behind shorter redemption deadlines.

*Overconfidence and Temporal Distance.* Earlier, we discussed the overconfidence literature and how it relates to a probabilistic redeemer's willingness to make rebate-dependent purchases. Temporal distance also influences overconfidence and is relevant to predicting the influence of deadline length on purchase behavior. Research has demonstrated that people become more overconfident as the temporal distance between solicitation of a prediction and the predicted event increases (e.g. Gilovich, Kerr, and Medvec 1993; Milburn 1978; Wright and Ayton 1992). The influence of temporal distance on confidence may be a consequence of

peoples' failure to consider factors that may interfere with the predicted outcome. For example, research has shown that predictions made about engaging in a distant future behavior generate more reasons for success than failure, with the pattern reversing when people make predictions on the day of the task (Gilovich et al. 1993). Generalizing this finding to rebate offers suggests that increasing the time a consumer has to complete the redemption application (i.e. increasing the length of the redemption deadline) will increase the consumer's confidence of a successful redemption, thereby encouraging consumers to make rebate-dependent purchases.

*Procrastination.* Procrastination is relevant to predicting how deadline length can influence redemption rates. Procrastination occurs when individuals repeatedly postpone tasks or engage in substitute diversionary activities (e.g., Akerlof 1991; Knaus 2000; Silver 1974). Several studies have explored the daily tasks that are delayed by procrastinators and have found that people tend to avoid tasks that they perceive as more aversive or less attractive than an alternative use of one's time (Sigall, Kruglanski, and Fyock 2000). Procrastinators make poor estimates about the amount of time needed to complete activities (Buehler, Griffin, and Ross 1994; Lay 1988), commence tasks later than non-procrastinators (Ferrari 1993; Pychyl, Morin, and Salmon 2000; Sigall et al. 2000), take longer to complete tasks (Holmes 2002; Lay 1988), and fail to act on their intentions to perform tasks (Lay and Burns 1991). Knaus (2000) argues that procrastination persists because people (a) have a desire to avoid the activity, (b) make a decision to delay, (c) promise themselves to get to it later, (d) engage in substitute diversionary activities, and (e) make excuses to justify delays and exonerate themselves from blame.

Research shows that tasks can be structured to increase or decrease procrastination. Deadlines help to mitigate procrastination by facilitating (and, in some cases, forcing) the completion of tasks. For example, Ariely and Wertenbroch (2002) observed that students were

willing to self-impose deadlines to overcome procrastination, but that performance under self-imposed deadlines was poorer than when deadlines were externally imposed by the instructor. Perhaps most importantly, research has demonstrated that the longer people are given to complete a task, the greater the likelihood of procrastination and failing to complete the task. For example, Tversky and Shafir (1992) offered students \$5 for answering and returning a questionnaire within 5 days, 3 weeks, or within no deadline and observed return rates of 60%, 42%, and 25% respectively. This result may have been caused by a combination of procrastination and forgetting and is consistent with research by Scher and Ferrari (2000) showing that the longer one procrastinates, the greater the likelihood that one will forget to start or complete a task. The implication of this research is that increasing the length of the redemption deadline may be an effective means of fostering procrastination and decreasing redemption rates.

*Prospective Forgetting.* If procrastination can lead to forgetting, it is important to understand factors that encourage or discourage forgetting of the intention to redeem. The literature on prospective forgetting has examined people's ability to retrieve and act on previously formed intentions (e.g., Krishnan and Shapiro 1999; Marsh, Hicks, and Watson 2002; Shapiro and Krishnan 1999). This stream of research has shown that consumers frequently forget to act on previously formed intentions, and that the successful completion of intentions is contingent on a prospective memory component (memory that an intention was formed) and a retrospective component (memory for the content of the intention). Delays or intervening activities that separate formation of an intention and the opportunity to act on the intention are likely to foster forgetting (Shapiro and Krishnan 1999). Thus, the delay that is imposed between purchasing a rebate offer and the opportunity to redeem it (i.e., when the redemption application

must be completed after leaving the store) is likely to foster forgetting. This may explain why delay-fostering behaviors, such as procrastination, often lead to forgetting (Scher and Ferrari 2000), and is consistent with reports of consumers who procrastinate and forget to initiate the redemption process (e.g., McLaughlin 2002; Norr 2000; Shim 2002; Spencer 2002). Consumers are also more likely to forget to act on intentions when their environment is void of external cues that may prompt them to act on their intentions (Marsh et al. 2002). For example, requiring a consumer to submit a cash register receipt with a rebate application provides the consumer with a potential memory cue. Consolidating and/or reducing the availability of external cues such as receipts and redemption forms is likely to foster forgetting.

*Predictions.* The literature on overconfidence and temporal distance suggests that increasing the length of the redemption deadline will increase the consumer's confidence of a successful redemption and encourage purchases by probabilistic redeemers ( $H_{55a}$ ). The literature on procrastination and prospective forgetting suggests that lengthening the deadline will decrease redemption rates for all segments of redeemers ( $H_{R5a}$ ). Note that both of these predictions run counter to current industry practice, despite predicting a net increase in profitability.

### **Interaction of Rebate Characteristics**

Managers view the reward amount, the effort to redeem, and the redemption deadline as three independent drivers of purchase and redemption behavior. As our survey results show, managers believe that increasing the value of the reward increases the number of consumers that will purchase and redeem. Managers also believe that increasing the amount of effort required to redeem reduces the proportion of consumers that will purchase and redeem. Yet, managers were quite mixed in their beliefs about whether longer deadlines increase sales and redemption rates. We expect that managers are accurately reporting what they have observed, but that they are

observing different parts of an interaction between the length of the redemption deadline and the reward and effort variables.

To help understand the possible interactions between rebate reward amount, redemption effort, and the length of the redemption deadline on sales and redemptions, consider a situation in which reward is varied as an absolute value at a constant strike price. Also assume that a manager can monitor purchase behavior and redemption behavior for short and long redemption deadlines. First, consider purchase response for a short redemption deadline. Short redemption deadlines require that the consumer initiate the redemption quickly, so the effort / reward ratio associated with redeeming is likely to be salient at the time of purchase. In this case, increasing the effort required to receive the reward will reduce sales. In contrast, long redemption deadlines do not encourage the consumer to consider the redemption effort (i.e., the effort is discounted, as was observed by Soman 1998). In this case, increasing the effort required to redeem the rebate will have little impact on sales. Thus, managers reporting a drop in sales as a consequence of shortening the redemption deadline may be using rebate promotions that require a high amount of effort relative to the reward (H<sub>56a</sub>). Managers reporting no change in sales as a consequence of shortening the deadline may be using rebate promotions that require a low amount of effort relative to the reward (H<sub>57a</sub>).

It is also possible to anticipate the how interactions among rebate promotion characteristics might influence redemptions. Recall that some managers report that increasing redemption effort increases redemption rates, whereas others report that increasing effort decreases redemption rates. We expect that increasing the required redemption effort will increase redemption rates when redemption deadlines are short. In this case, the effort / reward ratio is salient and rebate-dependent purchasers are likely to have already considered the

difficulty associated with redeeming the rebate (in effect, purchase represents a type of self-selection based on consideration of the effort / reward ratio). As the required redemption effort increases, the proportion of intended redeemers to probabilistic redeemers increases, and the likelihood that a purchaser is willing to exert the required effort increases (H<sub>S6a</sub>). In contrast, we expect that increasing redemption effort will decrease redemption rates when redemption deadlines are long. Long redemption deadlines will encourage people to discount the effort required, and many more probabilistic redeemers should purchase. These probabilistic redeemers will be more likely to procrastinate, forget, and be surprised at the size of the effort, relative to the reward, when the redemption process is finally initiated. These influences will lower the likelihood that the buyer will complete the redemption process (H<sub>R7a</sub>).

## **GENERAL DISCUSSION**

The behavioral literature has the potential to inform managers about the successful management of rebate promotions as well as explain differences in managers' opinions regarding the influence of offer characteristics. We wish to focus on three predictions that may have large implications for the management of rebate promotions: (1) the unexpected influence of increasing the absolute value of reward at a constant strike price, (2) the unexpected influence of shorter redemption deadlines, and (3) the interaction of effort and redemption deadlines. Discussing these implications will help to prioritize the research agenda.

### **Increasing Rewards**

Our discussions with managers suggest that they often view a rebate as a price discount on the list price of a product. For example, an industry researcher at Beyen Corporation, comments, "Rebates work as well as actual price cuts in driving store traffic, but they have the

added benefit of providing useful customer information,” (Becker 2002). If consumers do view purchase and redemption as independent decisions, the strike price (i.e., price after rebate) is likely to have the greatest influence on purchase; and the absolute value of the reward, not the percentage discount, is likely to have the greatest influence on redemption.

The implication is that high-percentage rewards may be quite effective for low priced items (e.g., a \$2 rebate on a \$4 purchase) where the reward significantly reduces the strike price, provided the redemption effort is sufficiently large to minimize redemptions (by rendering the effort/reward ratio unattractive at the time of redemption). However, increasing the absolute value of rewards on higher priced items (e.g., \$20 rebate on a \$120 purchase versus a \$40 rebate on a \$140 purchase) may prove ineffective and costly. In particular, the segregation perspective predicts that increasing the reward at a given strike price will have little effect on incremental sales to intended redeemers, decrease incremental sales to probabilistic redeemers, and increase redemptions for all segments by making the effort/reward ratio appear more attractive at the time of redemption. Such a strategy may result in redemptions exceeding incremental sales if the reward is sufficiently large to encourage redemptions by opportunistic redeemers. In contrast, the overconfidence perspective predicts a net gain from increasing reward values at a constant strike price. We suspect that the true net gain/loss achieved from increasing reward sizes is difficult to forecast and may depend on the relative number of intended and probabilistic redeemers. This is clearly an area that warrants empirical investigation, especially given the prominence of large reward values in consumer electronics.

### **Shorter Redemption Deadlines**

Managers report that quicker execution in launching promotions and the desire to complete and evaluate promotions in a timely manner are the forces behind the trend toward

shorter redemption deadlines. Managers also tell us that they fear increasing the length of redemption deadlines because they generally believe that giving consumers more time to redeem will increase redemption rates. The trend toward shorter deadlines is potentially important given that our review of the literature predicts that shorter deadlines have the potential to decrease sales and increase redemption rates. Furthermore, the survey results suggest that managers are largely unaware of these potential effects. This issue may have been overlooked for a number of reasons, including the slow movement of the trend, high turnover in analyst positions, the focus on incremental sales and short turn-around times, and the diagnostic limitations of the performance metrics we discussed earlier. It is also worth noting that the vast majority of the organizations we surveyed (67%) do not conduct formal quantitative analyses such as promotion modeling to assess the influence of changes in offer characteristics. It would therefore be valuable to obtain industry data on past promotions and to conduct a formal quantitative analysis on the influence of deadline length.

It is worth noting that our deadline length predictions appear to run counter to research on coupon redemption which has shown that coupons are often redeemed long after the positive sales impact of the coupon have ended (Klein 1981). This research was apparently instrumental at the time in persuading companies to tighten expiration dates on coupons so to limit non-incremental buyers from redeeming the coupons after the “sales bump” period of incremental sales gains. We believe that the influence of deadlines on redemption rates is fundamentally different for coupons and rebates because of the way in which the two promotions are structured. With coupons, the expiration date of the coupon is tied to the duration of the promotion because the consumer is required to redeem the coupon at the time of purchase. Thus, the longer the deadline, the longer the offer is valid and promoted in stores, and more coupons will be used

(redeemed). This is not the case for rebates. The expiration date for redeeming a rebate is independent of the length of the promotion because rebates are redeemed after purchase (i.e., the rebate promotion can be offered and promoted in stores for a two-week period, while giving consumers up to 30 days after purchase date to redeem the rebate). In this case, longer expiration deadlines do not necessarily mean more people will redeem the rebate. What is interesting is that managers may be inappropriately applying a coupon redemption paradigm to rebate offers in believing that giving consumers more time to redeem will increase redemption rates. It is understandable that managers would think this way given the apparent similarities between rebates and coupons. However, our review of the literature suggests otherwise.

### **Interaction of Effort and Redemption Deadline**

Management opinions were found to be mixed regarding whether increasing redemption deadlines influences incremental sales and redemption rates. We suspect that an effort by redemption deadline interaction may account for this finding. As discussed earlier, effort is likely to be more salient when required shortly after purchase, and less salient when delayed (Soman 1998). Thus, managers would witness a decrease in incremental sales when decreasing the deadline of a high-effort offer, but would witness little change in incremental sales when decreasing the deadline of a low-effort offer. Based on our review of the literature, the high effort / short deadline offer is the least desirable type of offer due to its potential to decrease sales and increase redemption rates.

### **Limitations and Future Research**

It should be noted that the data presented in this article were generated by a very limited sample. Our goals in presenting the data were not to imply generalizability, but rather to (1) present data on industry practice, (2) review behavioral theories that can comment on the

appropriateness of industry practice and the variance in managers' opinions, and (3) highlight differences between industry practice and the predictions of behavioral theory. We are hopeful that our discussion has offered some insight into purchase and redemption behavior and that it will encourage additional research by managers and academics. In particular, we learned that promotion managers enthusiastically support the idea of doing research on rebates, but very few are willing to provide data or participate in research (see Table 1: factors limiting research on rebates). We hope this will change. Given the apparent need for research, and the barriers that have limited research to date, data sharing and a collaborative effort among managers and researchers is likely advance our understanding of purchase and redemption behavior and the management of rebate promotions.

**TABLE 1**  
**SUMMARY OF SURVEY RESPONSES**

Issue	Measure		
Use of promotion evaluation metrics, N=35	Proportion of sample reporting use		
Redemption rate on total sales:	51.4%		
Redemption rate on circulated offers:	51.4%		
Incremental unit sales:	45.7%		
Non-compliance / rejection rate on applications received:	45.7%		
Total unit sales:	42.9%		
Net profit (profit on incremental sales –rewards and expenses):	31.4%		
Redemption rate on incremental sales:	28.6%		
Estimates of Redemption and Non-Redemption by Consumer Segment, N=35	Mean estimate		
Proportion of rebate applications attributable to “rebate dependent purchasers”:	52.1%		
Proportion of rebate applications attributable to “opportunistic redeemers”:	47.9%		
Proportion of non-redeemed rebates attributable to “breakage”:	63.5%		
Proportion of non-redeemed rebates attributable to “intended non-redeemers”:	36.5%		
	Proportion of sample reporting		
Beliefs regarding the influence of offer variables on sales, N=35	Increase sales	Decrease sales	No change
Increasing the reward as a % of the list price will:	97.1%	0.0%	2.8%
Increasing the absolute value of the reward at a constant strike price will:	100.0%	0.0%	0.0%
Increasing the effort required to redeem will:	11.4%	65.7%	22.9%
Increasing the length of the redemption deadline will:	40.0%	2.8%	57.1%
	Proportion of sample reporting		
Beliefs regarding the influence of offer variables on redemption rates, N=35	Increase redemption rate	Decrease redemption rate	No change
Increasing the reward as a % of the list price will:	88.6%	0.0%	11.4%
Increasing the absolute value of the reward at a constant strike price will:	88.6%	0.0%	11.4%
Increasing the effort required to redeem will:	17.2%	62.1%	20.7%
Increasing the length of the redemption deadline will:	60.0%	2.8%	37.1%
Factors limiting research on rebates, N=35	Proportion of sample reporting		
Lack of standardized measures among firms:	68.6%		
Poor data collection systems:	80.0%		
Insufficient time or resources to conduct research:	65.7%		
Firms uncomfortable with or unwilling to share data:	82.9%		
Would you benefit from additional research on rebates?	Yes = 80.0%	No = 20.0%	
Would you be willing to supply data on past rebate promotions for a study?	Yes = 17.1%	No = 82.9%	
Would you be willing to participate in a test market or field study?	Yes = 31.4%	No = 68.6%	

**TABLE 2**  
**PREDICTIONS ABOUT THE IMPACT OF CHANGING OFFER VARIABLES**

Variable	Potential Effects on Sales	Potential Effects on Redemptions	Potential Net Outcome
Increase discount percentage of reward	H <sub>S</sub> 1a) Increase sales to intended and probabilistic redeemers (via reward segregation). H <sub>S</sub> 1b) Increase sales to probabilistic redeemers (via increased confidence).	H <sub>R</sub> 1a) Increase redemptions by all segments (via redemption segregation).	Indeterminant.
Increase absolute value of reward at a constant strike price	H <sub>S</sub> 2a) Decrease sales to probabilistic redeemers (via reward segregation). H <sub>S</sub> 2b) Increase sales to probabilistic redeemers in an independent choice task (via increased confidence).	H <sub>R</sub> 2a) Increase redemptions by all segments (via redemption segregation). H <sub>R</sub> 2b) Little / no influence on redemptions (increased confidence ≠ increased rates of behavior).	H <sub>P</sub> 2a) Decrease profitability (segregation prediction). H <sub>P</sub> 2b) Increase profitability (confidence prediction).
Increase delay to receive reward		H <sub>R</sub> 3a) Decrease redemptions by all segments (via redemption segregation and temporal discounting).	Increase profitability.
Increase effort to redeem reward	H <sub>S</sub> 4a) Decrease sales to probabilistic redeemers (via perceptions of effort).	H <sub>R</sub> 4a) Decrease redemptions by all segments (via giving up, errors and rejections).	Increase profitability.
Increase length of redemption deadline	H <sub>S</sub> 5a) Increase sales to probabilistic redeemers (via increased confidence).	H <sub>R</sub> 5a) Decrease redemptions by all segments (via procrastination and forgetting).	Increase profitability.
Increase effort in short redemption deadline	H <sub>S</sub> 6a) Decrease sales to probabilistic and intended redeemers (via salience of effort / reward).	H <sub>R</sub> 6a) Increase redemptions (via self selection at time of purchase and increased proportion of intended redeemers).	Decrease profitability.
Increase effort in long redemption deadline	H <sub>S</sub> 7a) Little / no influence on sales to probabilistic and intended redeemers (via effort discounting).	H <sub>R</sub> 7a) Decrease redemptions by all segments (via giving up, errors and rejections, and via procrastination and forgetting).	Increase profitability.

**FIGURE 1**  
**SEGMENTING PURCHASERS OF PRODUCTS WITH REBATE OFFERS**

Classification	Segment	Offer A		Offer B		Offer C	
		PUR	RDN	PUR	RDN	PUR	RDN
Rebate-independent purchasers (Base sales)	Intended Non-Redeemers	.7	.0	.6	.0	.4	.0
	Opportunistic Redeemers	.1	.1	.0	.0	.0	.0
Rebate-dependent purchasers (Incremental sales)	Probabilistic Redeemers	.0	.0	.2	.1	.4	.2
	Intended Redeemers	.2	.2	.2	.2	.2	.2
<b>Total</b>		<b>1.0</b>	<b>.3</b>	<b>1.0</b>	<b>.3</b>	<b>1.0</b>	<b>.4</b>
Incremental sales as a percentage of existing base sales		25%		67%		150%	
Redemption rate on total sales		30%		30%		40%	
Redemption rate on rebate-dependent purchasers		100%		75%		67%	

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PUR represents each segment's contribution to total purchases.  
RDN represents each segment's contribution to total redemptions.

## REFERENCES

- Akerlof, George A. (1991), "Procrastination and Obedience," *American Economic Review*, 81 (May) 1-19.
- Ali, Abdul, Marvin A. Jolson, and Rena Y. Darmon (1994), "A Model for Optimizing the Refund Value in Rebate Promotions," *Journal of Business Research*, 29 (March), 239-245.
- Ariely, Dan and Klaus Wertenbroch (2002), "Procrastination, Deadlines, and Performance: Self-Control by Precommitment," *Psychological Science*, 13 (May), 219-224.
- Avila, Ramon A., Joseph D. Chapman, and Teresa K. Avila (1989), "An Exploratory Study on Consumer's Attitudes Toward Rebates," in *Developments in Marketing Science*, 12, 273-77.
- Becker, David (2002), "Rebates Key for Retail Software Sales," *CNET News.com*, November 12, 2002, (accessed December 11, 2002), [available at <http://news.com.com/2100-1040-965514.html>].
- Bowman, Russell (1989), "Dollars Up But Cooling Down," *Marketing & Media Decisions*, 24 (July), 124-126.

- Buehler, Roger, Dale Griffin, and Michael Ross (1994), "Exploring the "Planning Fallacy": Why People Underestimate Their Task Completion Times," *Journal of Personality and Social Psychology*, 67 (September), 366-381.
- Ferrari, Joseph R. (1993), "Christmas and Procrastination: Explaining Lack of Diligence at a 'Real-World' Task Deadline," *Personality and Individual Differences*, 14 (January), 25-33.
- Frederick, Shane, George Loewenstein, and Ted O'Donoghue (2002), "Time Discounting and Time Preference: A Critical Review," *Journal of Economic Literature*, 40(June), 351-401.
- Gilovich, Thomas, Margaret Kerr, and Victoria Husted Medvec (1993), "Effect of Temporal Perspective on Subjective Confidence," *Journal of Personality and Social Psychology*, 64 (April), 552-560.
- Greenman, Catherine (1999), "The Trouble with Rebates," *The New York Times*, September 16, 1999, G1.
- Griffin, Dale W., David Dunning, and Lee Ross (1990), "The Role of Construal Processes in Overconfident Predictions about the Self and Others," *Journal of Personality and Social Psychology*, 59 (December), 1128-1139.

- Hoch, Stephen J. (1985), "Counterfactual Reasoning and Accuracy in Predicting Personal Events," *Journal of Experimental Psychology: Learning, Memory and Cognition*, 11 (4), 719-731.
- Holmes, Richard Alan (2002), "The Effect of Task Structure and Task Order on Subjective Distress and Dilatory Behavior in Academic Procrastinators," doctoral dissertation, Hofstra University.
- Hunt, Kenneth A. and Susan M. Keaveney (1992), "Sales Promotion Wars: A Strategic Application of Attribution Theory," *Journal of Promotion Management*, 1 (3), 3-20.
- , Susan M. Keaveney, and Moonkyu Lee (1995), "Involvement, Attributions and Consumer Responses to Rebates," *Journal of Business and Psychology*, 9 (Spring), 273-297.
- Jolson, Marvin, Joshua Weiner, and Richard Rosecky (1987), "Correlates of Rebate Proneness," *Journal of Advertising Research*, 27 (Feb-March), 33-43.
- Klein, Robert L. (1981), "Using Supermarket Scanner Panels to Measure the Effectiveness of Coupon Promotions," in *Proceedings of the Third ORSA/TIMS Special Interest Conference on Market Measurement and Analysis*, John W. Keon, ed., The Institute of Management Sciences, Providence, Rhode Island, pp 118-124.
- Knaus, William J. (2000), "Procrastination, Blame and Change," *Journal of Social Behavior and*

*Personality*, 15 (Special Issue), 153-166.

Krishnan, H. Shanker and Stewart Shapiro (1999), "Prospective and Retrospective Memory for Intentions: A Two-Component Approach," *Journal of Consumer Psychology*, 8 (2), 141-166.

Lanctot, Roger (2002), "Rebates Rule in the Retail Computer Software Market," *Business Wire*, November 12, 2002.

Lay, Clarry H. (1988), "The Relation of Procrastination and Optimism to Judgments of Time to Complete an Essay and Anticipation of Setbacks," *Journal of Social Behavior and Personality*, 3 (September), 201-214.

---- and Peter Burns (1991), "Intentions and Behavior in Studying for an Examination: The Role of Trait Procrastination and its Interaction with Optimism," *Journal of Social Behavior and Personality*, 6 (September), 605-617.

Marsh, Richard L., Jason L. Hicks, and Valerie Watson (2002), "The Dynamics of Intention Retrieval and Coordination of Action in Event-Based Prospective Memory," *Journal of Experimental Psychology: Learning Memory, and Cognition*, 28 (July), 652-659.

McGinn, Daniel (2003), "Let's Make a (Tough) Deal," *Newsweek*, June 23, 2003, 48-49.

McLaughlin, Katy (2002), "Cranky Customer: Claiming That Holiday Rebate," *The Wall Street Journal*, December 3, 2002, D2.

Milburn, Michael (1978), "Sources of Bias in the Prediction of Future Events," *Organizational Behavior and Human Performance*, 21 (February), 17-26.

New York Times (2001), "Microsoft Network Drops \$400 Rebate," *New York Times*, February 3, 2001, C4.

Norr, Henry (2000), "The How and Why of Rebates," *San Francisco Chronicle*, December 18, 2000, T21.

Pulford, Briony D. and Andrew M. Colman (1996), "Overconfidence, Base Rates, and Outcome Positivity/Negativity of Predicted Outcomes," *British Journal of Psychology*, 87 (August), 431-445.

Pychyl, Timothy A., Richard W. Morin, and Brian R. Salmon (2000), "Procrastination and the Planning Fallacy: An Examination of the Study Habits of University Students," *Journal of Social Behavior and Personality*, 15 (Special Issue), 135-150.

Rothschild, Michael (1987), *Marketing Communications: From Fundamentals to Strategies*, Lexington, MA: D. C. Heath.

Scher, Steven J. and Joseph R. Ferrari (2000), "The Recall of Completed and Noncompleted Tasks Through Daily Logs to Measure Procrastination," *Journal of Social Behavior and Personality*, 15 (Special Issue), 255-265.

Schultz, Don E. and William A. Robinson (1982), *Sales Promotion Essentials*, Chicago, IL: Crain.

Shapiro, Stewart and H. Shanker Krishnan (1999), "Consumer Memory for Intentions: A Prospective Memory Perspective," *Journal of Experimental Psychology: Applied*, 5 (June), 169-189.

Shim, Richard (2002), "Philips Settles Rebate Complaint," *The New York Times*, August 7, 2002.

Sigall, Harold, Arie Kruglanski, and Jack Fyock (2000), "Wishful Thinking and Procrastination," *Journal of Social Behavior and Personality*, 15 (Special Issue), 283-296.

Silver, Maury (1974), "Procrastination," *Centerpoint*, 1, 49-54.

Soman, Dilip (1998), "The Illusion of Delayed Incentives: Evaluating Future Effort-Money Transactions," *Journal of Marketing Research*, 35 (November), 427-437.

Spencer, Jane (2002), "Rejected! Rebates Get Harder to Collect," *The Wall Street Journal*, June 11, 2002, D1.

Tat, Peter (1994), "Rebate Redemption: A Motivational Perspective," *Psychology & Marketing*, 11 (Jan/Feb), 15-26.

----, William Cunningham III, and Erin Babakus (1988), "Consumer Perceptions of Rebates," *Journal of Advertising Research*, 28 (Aug-Sep), 45-50.

---- and Charles Schwepker (1998), "An Empirical Investigation of the Relationship Between Rebate Redemption Motives: Understanding How Price Consciousness, Time and Effort, and Satisfaction Affect Consumer Rebate Redemptions," *Journal of Marketing Theory and Practice*, 6 (Spring), 61-71.

Tversky, Amos and Eldar Shafir (1992), "Choice Under Conflict: The Dynamics of Deferred Decisions," *Psychological Science*, 3 (November), 358-361.

Vallone, Robert. P., Dale W. Griffin, Sabrina Lin, and Lee Ross (1990), "The Overconfident Prediction of Future Action Outcomes by Self and Others," *Journal of Personality and Social Psychology*, 58 (April), 582-592.

Wright, George and Peter Ayton (1992), "Judgmental Probability Forecasting in the Immediate and Medium Term," *Organizational Behavior and Human Decision Processes*, 51 (April), 344-363.