

In four studies, the authors show that consumers' savings can be increased or decreased merely by changing the way consumers think about their saving goals. Consumers can (1) either specify or not specify an exact amount to save (goal specificity) and (2) focus on either how to save or why to save (construal level). The results illustrate that specific goals help consumers save more when the saving goal is construed at a high level but that nonspecific goals help consumers save more when the saving goal is construed at a low level. The same pattern of results occurs with anticipated saving success and actual savings. Mediation analyses reveal that for high-level construers, specific (vs. nonspecific) goals lead to success because they are perceived as more important. However, specific (vs. nonspecific) goals are also perceived as more difficult, which is more discouraging for low-level construers.

*Keywords:* goals, saving, financial decision making, goal specificity, construal level

## Framing Goals to Influence Personal Savings: The Role of Specificity and Construal Level

Consumers often limit their current consumption and allocate a part of their income to savings to achieve financial goals. Savings are an important means of smoothing consumption because they act as a buffer against income shocks and facilitate long-term planning (Modigliani 1986). According to the permanent income hypothesis (Hall 1978), consumers change their consumption and savings in response to news about their future income. These views assume that consumers make rational decisions about whether and how much to save.

Although the importance of saving is indisputable, most studies conclude that left to themselves, consumers do not save enough (Kotlikoff, Spivak, and Summers 1982; Shefrin and Thaler 1988). Insufficient savings may be due

to errors in spending forecasts (Ülkümen, Thomas, and Morwitz 2008), errors in calculation (Benartzi and Thaler 2004), lapses in self-control (Baumeister 2002), a disproportionate emphasis on the present rather than the future (Lynch and Zauberman 2006), or the effects of culture (Briley and Aaker 2006). Therefore, consumers could benefit from mechanisms that help them reach their optimal saving levels (Benartzi and Thaler 2004; Botti and Iyengar 2006; Madrian and Shea 2001).

Understanding the factors that influence consumer savings is of great interest to government agencies, financial services firms, and banks, as well as consumers themselves. Consumers must save the right amount to ensure a comfortable future. Governments encourage changes to personal saving rates to promote either economic stability or growth. Accordingly, policy makers could benefit from a tool that can influence consumer savings. Such a tool would be beneficial to increase savings among the poor (Bertrand, Mullainathan, and Shafir 2006), encourage sufficient savings for health care and retirement (Iyengar, Jiang, and Huberman 2004), and increase well-being (Diener, Diener, and Diener 1995).

Is it possible to influence consumers' saving behavior simply by changing the way they think about their savings? In this research, we explore whether and how goal framing influences saving success. Imagine a consumer who wants to save money for an upcoming trip. There are several different ways to think about this saving goal. For example,

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when thinking about *how much* to save, consumers can be more or less specific. Consumers can decide to save some money without specifying an amount (e.g., “I need to save as much as I can”), thereby setting a nonspecific goal. Alternatively, consumers can choose to specify the amount they need to save (e.g., “I need to save \$500”), thereby setting a specific goal. Another factor that influences how consumers think about saving goals is the level at which this goal is represented. In particular, consumers can focus on either why to save (high-level construal) or how to save (low-level construal) (Trope and Liberman 2003).

Prior research on goal following has focused on goal specificity (Naylor and Ilgen 1984; Wright and Kacmar 1994) and level of construal (Fujita et al. 2006) and has examined their effects on goal following separately. In this research, we study how these two factors together influence saving-related outcomes, such as anticipated success and, importantly, goal achievement. We examine the conditions under which specific (vs. nonspecific) saving goals facilitate and impede goal attainment, by exploring how the effect of specificity varies across low versus high levels of construal (Liberman and Trope 1998; Vallacher and Wegner 1987).

Across four studies, we first ask participants to consider a saving occasion. To manipulate goal specificity, we then either ask them to indicate the dollar amount they want to save for this occasion (specific goal condition) or do not prompt them to specify the amount (nonspecific goal condition). Thus, to operationalize specific saving goals, we increase the salience of the saving amount by asking participants to explicitly report this amount. Furthermore, we either manipulate construal level through elaboration instructions (Study 1) or measure chronic (Studies 2 and 3) or goal-related (Study 4) differences in construal.

In Study 1, we find that consumers who construe their saving goal at a high level anticipate greater saving success if they specify how much to save. In contrast, consumers who construe their saving goal at a low level anticipate greater success if they do not specify an amount. Illustrating the process, Study 1 shows that high-level construers (those who focus on why to save) perceive specific goals as more important than nonspecific goals and therefore anticipate greater success. Specific goals are also perceived as more difficult than nonspecific goals, which is discouraging for low-level construers (those who focus on how to save). Importantly, we find that the level at which a saving goal is construed and its specificity influence not only anticipated success but also actual success in saving. By examining consumers’ actual savings over one month, Study 3 shows that the amount consumers save can be influenced by changing the way they think about their saving goal. With these results, in Study 4 we present a simple intervention to influence consumers’ savings.

## THEORETICAL BACKGROUND

### *Goal Specificity*

Goal specificity is a measure of the “ambiguity or diffuseness in the exact level of performance desired” (Wright and Kacmar 1994, p. 243; see also Naylor and Ilgen 1984). A consumer who wants to save money can either plan to save as much as possible (a nonspecific goal) or specify the exact amount to save (a specific goal). Thus, we

treat explicit goals (in which an exact savings amount is reported) as specific and those in which the amount is not explicitly reported as relatively less specific (Hollenbeck and Klein 1987). Prior research has found conflicting effects of goal specificity on goal attainment. While most studies suggest that increased goal specificity positively affects goal pursuit and attainment, other studies suggest that specific goals hurt performance compared with nonspecific goals.

### *Beneficial Effects of Goal Specificity*

Wright and Kacmar (1994) show that people are more committed to assigned goals when these goals are specific rather than nonspecific. There are several reasons specific goals may be more beneficial than nonspecific goals. Specific (vs. nonspecific) goals can increase goal commitment by clarifying the required level of performance (Hollenbeck and Klein 1987) and decreasing ambiguity about the payoff associated with effort (Naylor and Ilgen 1984). Consistent with control theory (Carver and Scheier 1981), Locke et al. (1989) suggest that specific goals are associated with lesser performance variability than nonspecific goals.

Saving money requires successful self-regulation of spending impulses (Shefrin and Thaler 1988). Literature on self-regulation shows that clear rules are more likely to be followed than ambiguous rules (e.g., Ainslie and Haslam 1992). Specific goals improve resistance to temptation in children (Mischel and Patterson 1976) and increase persistence (Carter, Patterson, and Quasebarth 1979). Furthermore, establishing specific subgoals (vs. focusing on long-term goals) improves adult weight loss (Bandura and Simon 1977). These results suggest that increasing goal specificity should improve performance on saving goals.

### *Detrimental Effects of Goal Specificity*

Another, albeit smaller, stream of research shows that specific goals may be detrimental to performance. In the context of an 11-week study improvement program, Kirschenbaum, Humphrey, and Malett (1981) find that students with less (vs. more) specific goals spend more time studying and improve study habits to a greater extent. Thus, in this study, specific goals seem to inhibit self-regulation, compared with nonspecific goals. Perhaps this is because participants who are assigned less specific goals selectively employ achievable proximal goals, which allow more frequent positive experiences and self-reinforcement (Kirschenbaum, Humphrey, and Malett 1981). Thus, nonspecific goals may seem less difficult and therefore may be more likely to be accepted than specific goals (Naylor and Ilgen 1984). In contrast, specific goals may cause negative affective reactions for people who fail to achieve these goals, leading to “disengagement in self-regulation” (Kirschenbaum, Humphrey, and Malett 1981, p. 948; see also Soman and Cheema 2004). In summary, these results suggest that specific goals are more discouraging than nonspecific goals in certain instances.

### *Moderating Role of Construal Level*

Another factor related to framing of saving goals is the level at which goal-related actions are construed. According to the theory of action identification (Vallacher and Wegner 1987), the level at which a goal is identified or

represented varies across people and is an important determinant of goal commitment and success. Construal level theory (Trope and Liberman 2003) posits that construing a goal-directed action at a high level enables attention to be focused on why the goal is important. In contrast, when the same action is construed at a low level, a person focuses more on its feasibility and how to achieve the goal.

Consumers can differentially interpret the meaning of stimuli depending on their level of construal (Cheema and Patrick 2008). Similarly, we propose that the level of construal could color consumers' interpretation of and reaction to the specificity of a saving goal. To examine this process, we focus on two features of a goal: importance and difficulty.

The first part of our conceptual model addresses how specificity influences goal attainment through perceived goal *importance* (see Figure 1, Panel A). For high-level construers, who focus on the desirability of the goal at hand, specificity of a saving goal can be taken as an indication of its importance. Explicitly stating the amount they should save may signal to them that they have thought carefully about the goal. This is consistent with self-perception theory (Bem 1967) and also with the findings that elaboration can increase the importance of specific attributes in a decision (Wilson et al. 1993). Accordingly, we propose that goal specificity influences goal attainment because it influences perceived goal importance. Moreover, this effect should be moderated by construal level, such that high-level construers will interpret the specificity of a goal as a signal of its importance, whereas specificity will not influence low-level construers' perceptions of goal importance. In turn, perceived goal importance should be positively related to goal attainment in an unqualified manner; we expect all consumers to anticipate greater success and consequently perform better with goals they perceive as important. The second part of our conceptual model explicates the effects

of specificity on goal attainment through goal *difficulty* (see Figure 1, Panel B). We propose that the mediating role of goal difficulty will depend on the level of construal. Specifying the amount that needs to be saved should make all consumers perceive the goal as more difficult. However, construal level should affect how consumers respond to this difficulty. Because low-level construers are focused on how to achieve a goal, they will find difficult goals more discouraging than high-level construers.

In particular, in the domain of savings, specifying how much to save could cause consumers to either interpret the goal as important and therefore pursue it further or become discouraged by its difficulty and disengage. In this sense, specificity influences goal achievement in two distinct ways: The effect through importance is more perceptual and the effect through difficulty is more motivational in nature.

If the level at which a goal is construed determines how consumers interpret and respond to the specificity of a goal, this could explain the seemingly contradictory findings in the literature. In this research, we explore how goal specificity and construal level together influence saving-related outcomes, such as anticipated success and, importantly, goal achievement. Thus, we contribute to the literature on goal attainment by explaining when and how goal specificity affects performance. We also add to the theory by identifying the process by which specificity influences goal attainment. We test our hypotheses in the context of saving goals and show that consumers' savings can be increased simply by changing the way they think about this goal. We demonstrate our results and their generality in four studies, using different operationalizations of construal level (manipulated and measured) and different measures indicative of goal attainment (anticipated success and actual savings performance).

### Summary and Hypotheses

A consumer with a goal to save money can either plan to save as much as possible (nonspecific goal) or specify the exact amount to be saved (specific goal). We expect specific goals to lead to lower saving success when consumers focus on low-level construals that emphasize how they should attain the saving goal. In contrast, specific goals should lead to greater saving success when consumers focus on high-level construals that emphasize why they should engage in the saving goal. In our studies, we use two measures of saving success: anticipated saving success and actual savings amount. Formally, we hypothesize the following:

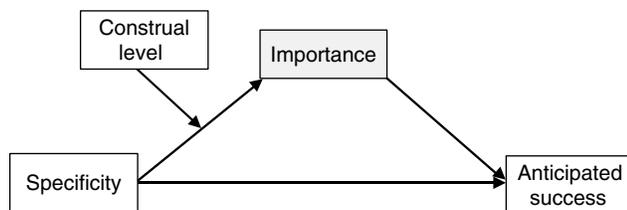
H<sub>1a</sub>: When the saving goal is construed at a low level, consumers with specific goals will be *less* successful in saving than those with nonspecific goals.

H<sub>1b</sub>: When the saving goal is construed at a high level, consumers with specific goals will be *more* successful in saving than those with nonspecific goals.

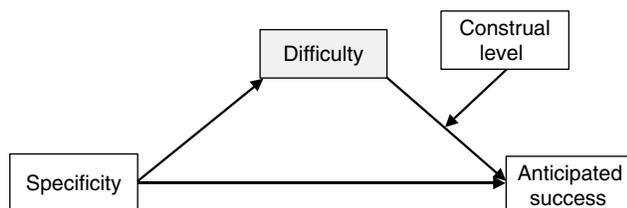
We further hypothesize that these effects occur through a process by which consumers differentially interpret and respond to the specificity of a saving goal, depending on their level of construal. For low-level construers, specific (vs. nonspecific) saving goals should lead to less success because these consumers will be more discouraged by the

Figure 1  
THEORETICAL MODEL

#### A: Mediating Role of Importance, as Moderated by Construal Level



#### B: Mediating Role of Difficulty, as Moderated by Construal Level



specificity-driven *difficulty* of the goal and become disengaged. For high-level construers, specific (vs. nonspecific) saving goals should lead to more success because these consumers will interpret a specific goal to be more *important*, and therefore they will be motivated to follow through. Thus, we hypothesize the following:

H<sub>2a</sub>: Increasing goal specificity will increase goal difficulty regardless of construal level. In turn, increased goal difficulty will lead to lower goal attainment for low- but not high-level construers. The absence of an indirect path from specificity, to difficulty, to attainment for high-level construers is due to a weakened link between goal difficulty and goal attainment.

H<sub>2b</sub>: For high- but not low-level construers, increasing goal specificity will increase goal importance, which in turn will increase goal attainment. The absence of an indirect path from specificity, to importance, to attainment for low-level construers is due to specificity not affecting perceived goal importance.

### STUDY 1: HOW AND WHY CONSTRUAL LEVEL AND SPECIFICITY INFLUENCE SAVING SUCCESS

The aim of Study 1 is to provide an initial demonstration that goal specificity and construal level influence consumers' expected success about their saving goals. Specifically, we examine whether and how the effect of goal specificity on expected success differs according to the level at which consumers construe the saving occasion (H<sub>1a</sub> and H<sub>1b</sub>).

Study 1 also explores the process underlying the hypothesized effect. In particular, we measure participants' perceptions of goal importance and goal difficulty and determine whether these mediate the effects of specificity across different levels of construal (H<sub>2a</sub> and H<sub>2b</sub>).

#### Participants, Method, and Design

We asked 97 undergraduates to complete this study in return for a token payment. Five participants did not complete the survey and were excluded; all analyses are for the remaining 92 participants. In the beginning of the study, participants completed an exercise that manipulated their level of construal (adapted from Freitas, Gollwitzer, and Trope 2004; see Web Appendix A at <http://www.marketingpower.com/jmrdec11>). Participants in the high-level construal condition completed a protocol that focused on why they would perform an activity (improving and maintaining one's physical health), while participants in the low-level construal condition completed a protocol that focused on how they would perform the same activity. Participants then completed an ostensibly unrelated study on savings. They listed a saving occasion in the next six months for which they wanted to save money. We manipulated goal specificity between subjects using Wright and Kacmar's (1994) process. Half the participants (specific goal) were asked to list the dollar amount they needed to save for the occasion, and the other half (nonspecific goal) were not asked this question. Thus, the study was a 2 (goal specificity: specific, nonspecific)  $\times$  2 (construal level: high, low) between-subjects design.

Next, all participants completed a three-item measure of anticipated success (how successful they will be in saving,

how likely is it that they will be able to save, and how confident they are that they will be able to save for this occasion; 1 = "disagree," and 7 = "agree"). The three items measuring anticipated success correlated highly, and so we combined them to create an anticipated success scale ( $\alpha = .90$ ). Participants then responded to process measures about goal importance (1 = "not at all important," and 7 = "very important") and goal difficulty (1 = "very easy," and 7 = "very difficult"). To check whether our specificity manipulation successfully made the saving amount more salient for the participants in the specific (vs. nonspecific) goal condition, we asked them to indicate their level of agreement with the statement, "I know precisely how much money I need to save for this occasion," on a seven-point scale. At the end of the study, participants in the nonspecific goal condition, who did not report the saving amount at the beginning of the study, reported this amount. Controlling for this amount did not change the overall pattern of results.

#### Results

*Saving amount specificity.* A 2 (goal specificity: specific, nonspecific)  $\times$  2 (construal level: high, low) analysis of variance (ANOVA) on the specificity manipulation check measure revealed only a main effect of specificity, such that participants in the specific (vs. nonspecific) goal condition believed more that they knew how much they needed to save ( $M_{\text{specific}} = 3.54$  vs.  $M_{\text{nonspecific}} = 2.72$ ;  $F(1, 88) = 5.32$ ,  $p < .05$ ). As we expected, neither the main effect of construal level ( $F(1, 88) < 1$ ) nor the two-way interaction ( $F(1, 88) < 1$ ) was significant. These results suggest not only that our specificity manipulation was effective ( $\omega^2 = .052$ ) but also that the construal level manipulation did not influence the level of specificity with which consumers thought about their saving goals.

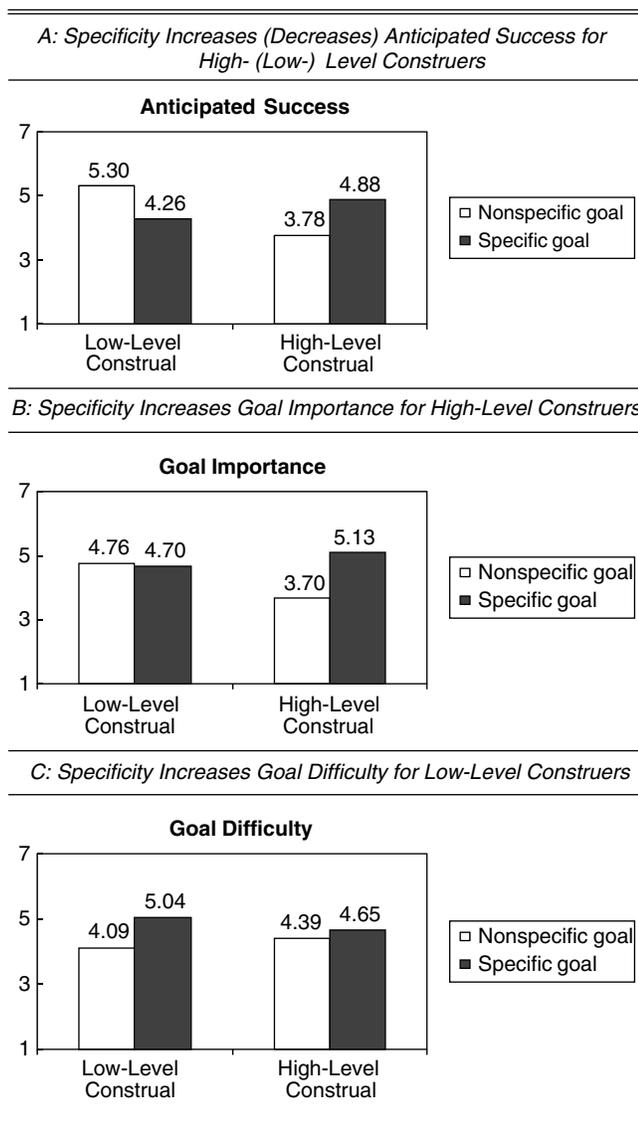
*Anticipated success.* An ANOVA revealed a significant specificity  $\times$  construal-level interaction ( $F(1, 88) = 15.27$ ,  $p < .0005$ ; see Figure 2, Panel A). In line with our expectations, among high-level construers, those with specific (vs. nonspecific) goals anticipated greater success ( $M_{\text{specific}} = 4.88$  vs.  $M_{\text{nonspecific}} = 3.78$ ;  $F(1, 88) = 8.07$ ,  $p < .01$ ). This pattern was reversed among low-level construers, such that those with specific (vs. nonspecific) goals anticipated less success ( $M_{\text{specific}} = 4.26$  vs.  $M_{\text{nonspecific}} = 5.30$ ;  $F(1, 88) = 7.24$ ,  $p < .01$ ).

*Goal importance.* An ANOVA revealed a significant specificity  $\times$  construal-level interaction ( $F(1, 88) = 4.90$ ,  $p < .05$ ; see Figure 2, Panel B). Among high-level construers, those with specific goals rated the saving task as more important ( $M_{\text{specific}} = 5.13$  vs.  $M_{\text{nonspecific}} = 3.70$ ;  $F(1, 88) = 8.97$ ,  $p < .005$ ). However, specificity did not affect goal importance for low-level construers ( $M_{\text{specific}} = 4.70$  vs.  $M_{\text{nonspecific}} = 4.76$ ;  $F(1, 88) > 1$ ). Overall, specific goals were rated as more important ( $M_{\text{specific}} = 4.91$  vs.  $M_{\text{nonspecific}} = 4.23$ ;  $F(1, 88) = 4.09$ ,  $p < .05$ ).

*Goal difficulty.* Specificity did not significantly affect goal difficulty for high-level construers ( $M_{\text{specific}} = 4.65$  vs.  $M_{\text{nonspecific}} = 4.39$ ;  $F(1, 88) > 1$ ; see Figure 2, Panel C). In contrast, low-level construers rated specific goals as more difficult ( $M_{\text{specific}} = 5.04$  vs.  $M_{\text{nonspecific}} = 4.09$ ;  $F(1, 88) = 2.10$ ,  $p < .05$ ). Overall, specific goals were rated as marginally more difficult ( $M_{\text{specific}} = 4.85$  vs.  $M_{\text{nonspecific}} = 4.24$ ;  $F(1, 88) = 3.58$ ,  $p < .10$ ).

Figure 2

STUDY 1: CONSTRUAL LEVEL MODERATES THE EFFECT OF SPECIFICITY ON ANTICIPATED SUCCESS, IMPORTANCE, AND DIFFICULTY



*Moderated mediation analysis with importance as the mediator.* As Figure 1, Panel A, depicts, the first part of our theoretical framework proposes a case of moderated mediation (Muller, Judd, and Yzerbyt 2005), in which construal level moderates the effect of specificity on importance (the mediator), which in turn influences anticipated success (Preacher, Rucker, and Hayes 2007, Model 2). We ran two multiple regression models to test our theoretical framework. The first mediator model examined the effects of specificity, construal level, and their interaction on importance. The significant interaction ( $b = 1.50, p < .05$ ) suggests that the indirect effect of specificity, through importance, varies as a function of construal level. The second dependent variable model examined the effects of importance, specificity, construal level, and the interaction between specificity and importance on anticipated success. This analysis revealed a significant effect of importance on antici-

pated success ( $b = .26, p < .005$ ) and a significant interaction ( $b = 1.76, p < .005$ ). As expected, we find that (1) whether specific goals are perceived as important depends on construal level and (2) goals that are perceived as important lead to greater anticipated success, regardless of construal level. As a result, the indirect effect of specificity on anticipated success, through importance, depends on construal level, providing support for our theoretical model (see Figure 1, Panel A). Using the recommended bootstrapping technique for testing conditional indirect effects, the results confirm that the conditional indirect effect of specificity on anticipated success, through importance, was significant for high-level construers ( $b = .37$ ; 95% confidence interval = .10, .82) but not for low-level construers ( $b = -.01$ ; 95% confidence interval =  $-.27, .26$ ).

*Moderated mediation analysis with difficulty as the mediator.* The second part of our theoretical framework pertains to the mediating role of difficulty. As Figure 1, Panel B, depicts, we propose a case of moderated mediation (Muller, Judd, and Yzerbyt 2005), in which difficulty mediates the effect of specificity on anticipated success and construal level moderates the effect of difficulty on anticipated success (Preacher, Rucker, and Hayes 2007, Model 3). We ran two multiple regression models to test our theoretical framework. The first mediator model, which examines the effects of specificity on difficulty, revealed a significant effect of specificity ( $b = .61, p < .07$ ). A second dependent variable model, which examines the effects of specificity, difficulty, construal level, and the interaction between difficulty and construal level on anticipated success, revealed a significant interaction ( $b = .41, p < .05$ ). These results show that (1) specific goals are perceived as more difficult regardless of construal level and (2) the effect of difficult goals on anticipated success depends on construal level, providing support for our theoretical model (see Figure 1, Panel B). With the use of the recommended bootstrapping technique for testing conditional indirect effects, the results confirmed that the conditional indirect effect of specificity on anticipated success, through difficulty, was significant for low-level construers ( $b = -.33$ ; 95% confidence interval =  $-.80, -.01$ ) but not for high-level construers ( $b = -.05$ ; 95% confidence interval =  $-.24, .15$ ).

*Mediation analyses with multiple mediators for each construal condition.* The final set of mediation analyses simultaneously tested for mediation through importance and difficulty within each level of construal. We used the recommended bootstrapping procedure in the indirect effects model (Preacher and Hayes 2008) and estimated the indirect effect (ab path) of specificity on anticipated success through each mediator.

In the low-construal condition, we find that the effect of specificity on anticipated effect is mediated by difficulty (indirect effect:  $b = -.19$ , 95% confidence interval =  $-.46, -.02$ ) but is not mediated by importance (indirect effect:  $b = .002$ , 95% confidence interval =  $-.13, .09$ ). In the high-construal condition, however, the effect of specificity is mediated by importance (indirect effect:  $b = .27$ , 95% confidence interval =  $.07, .62$ ) but is not mediated by difficulty (indirect effect:  $b = -.03$ , 95% confidence interval =  $-.17, .09$ ). These results provide additional support for the proposed process through which specificity affects anticipated success.

### Discussion

These results suggest that specific goals are not always beneficial. In support of  $H_{1a}$  and  $H_{1b}$ , explicitly considering the saving amount, which makes a saving goal specific, increases anticipated success when the goal is construed at a higher level but decreases anticipated success when the goal is construed at a lower level. Importantly, this study sheds light on the process by which specificity affects anticipated success. High-level construers, who are focused on why to perform a task, perceive specific goals as more important than nonspecific goals. Conversely, although specific goals are unanimously perceived as more difficult than nonspecific goals, only low-level construers, who are focused on how to perform a task, are discouraged by them. Thus, these results provide direct support for  $H_{2a}$  and  $H_{2b}$ .

In the beginning of Study 1 participants stated their own saving goals—a paradigm that closely follows many real-life situations. Because of the self-selected nature of these goals, there is no reason to expect systematic differences in the types of goals reported across conditions. At the same time, these goals exhibit a wide range of goal types and therefore present an opportunity to examine the effects of different variables, such as goal difficulty and preexisting mind-sets. In Study 2, we analyze reported goals on difficulty, abstractness/concreteness, and promotion/prevention focus, and we explore whether the findings are contingent on these factors. We also measure participants' individual-level construal tendencies to determine whether this effect manifests with chronic, as opposed to manipulated, construal level.

### STUDY 2: ROBUSTNESS OF THE EFFECT

Thus far, our findings show that construal level moderates the effect of goal specificity on expected saving success. It could be argued that this result is due to participants selecting particularly difficult goals for themselves. It might be that for easy goals, specifying the saving amount does not necessarily lead to lower success for low-level construers. To examine the role of goal difficulty as a possible moderator, in this study we use two proxy measures of goal difficulty: planned saving amount and monthly income. Presumably, having a goal that requires saving more money or having a lower monthly income would render saving more difficult.

Stated saving goals could also differ on their focus on promotion (e.g., to take a cruise vacation) or prevention (to have money for unforeseen expenses). Lee, Keller, and Sternthal (2010) find that the fit between regulatory focus and construal level can enhance attitudes. To determine the effects of regulatory focus on our results, we coded participants' goals and included this factor in the analysis.

We also explore whether chronically high- and low-level construers set goals at different levels of abstractness. In doing so, we test the robustness of the effect across different goal types.

### Participants, Method, and Design

One hundred seven working professionals, who were recruited for a small payment, participated in this study. Five people did not complete the survey and were excluded; all analyses are for 102 participants ( $M_{\text{age}} = 27$  years, median monthly income = \$1,200). All participants listed

an occasion in the next six months for which they wanted to save money. We manipulated specificity of the saving goal as in Study 1 (Wright and Kacmar 1994). On the next page, participants reported their anticipated success ( $\alpha = .94$ , see Study 1). Next, participants in the nonspecific goal condition also reported the planned saving amount (these participants had not previously reported the amount). Controlling for this amount did not change the overall pattern of results. Participants then reported their monthly income. Finally, all participants completed the Behavior Identification Form (BIF), which has been shown to reveal chronic differences in construal (Liberman and Trope 1998; Vallacher and Wegner 1989). The BIF describes each of 25 actions (e.g., eating) using both a low-level (chewing) and a high-level (getting nutrition) construal. Participants choose the most appropriate level for each action. A high-level construal is scored as 1, and a low-level construal is scored as 0. A participant's score is the total of the 25 actions. We used this continuous measure in all analyses.

### Results

*Saving amount specificity.* At the end of the study, a subset of the participants ( $n = 36$ ) indicated their level of agreement with the statement, "I know precisely how much money I need to save for this occasion," as a check on the effectiveness of the specificity manipulation. As we expected, participants in the specific condition reported greater agreement than those in the nonspecific condition ( $M_{\text{specific}} = 5.89$  vs.  $M_{\text{nonspecific}} = 4.28$ ;  $F(1, 32) = 9.12$ ,  $p < .005$ ,  $\omega^2 = .07$ ). Neither the main effect of construal level ( $F(1, 32) = 3.13$ ,  $p > .05$ ) nor the interaction term ( $F(1, 32) < 1$ ) reached significance. The results of a regression analysis suggest that the specificity was a significant predictor of the responses to the specificity manipulation check ( $b = 1.56$ ,  $t = 2.93$ ,  $p < .01$ ), whereas the BIF was not ( $b = .09$ ,  $t = 1.69$ ,  $p > .1$ ). The correlation between specificity and the specificity manipulation check was positive and significant ( $r = .451$ ,  $p < .01$ ), whereas there was no correlation between the BIF and the manipulation check ( $r = .276$ ,  $p > .1$ ). The BIF scores did not vary as a function of specificity ( $M_{\text{specific}} = 16.37$  vs.  $M_{\text{nonspecific}} = 16.31$ ;  $F(1, 100) = .004$ ,  $p = .95$ ). These results again demonstrate that our specificity manipulation was effective and also that the BIF score did not influence the level of specificity on the saving goals.

*Anticipated success.* We mean-centered all predictors. We performed a regression on the anticipated success scale with the following independent variables: (1) a dichotomous variable for specificity, (2) the BIF score, and (3) the two-way interaction. The results revealed a main effect of BIF ( $b = -.08$ ,  $t = 2.69$ ,  $p < .01$ ) and a two-way interaction between specificity and BIF ( $b = -.11$ ,  $t = -3.72$ ,  $p < .001$ ). To explore the interaction, we examined the effects of specificity at one standard deviation above and below the mean using a spotlight analysis. We mean-shifted the data to reflect values one standard deviation above and below the mean and conducted the analysis for an average-income person. The effect of specificity was positive and significant at high BIF ( $b = .59$ ,  $t = -3.03$ ,  $p < .005$ ), while the effect of specificity was negative and significant at low BIF ( $b = -.44$ ,  $t = 2.25$ ,  $p < .05$ ). A spotlight analysis at one standard deviation above the mean BIF score showed

that high-level construers anticipated greater success with specific than nonspecific goals ( $M_{\text{specific}} = 6.20$ ,  $M_{\text{nonspecific}} = 5.02$ ;  $F(1, 98) = 9.18$ ,  $p < .005$ ). A similar spotlight analysis at one standard deviation below the mean BIF score showed that low-level construers anticipated less success with specific than nonspecific goals ( $M_{\text{specific}} = 4.43$ ,  $M_{\text{nonspecific}} = 5.30$ ;  $F(1, 98) = 5.06$ ,  $p < .05$ ; see Figure 3).

**Goal difficulty.** We followed several different approaches to test the effects of saving goal difficulty. One proxy measure for goal difficulty is the reported *planned saving amount*, since goal difficulty should increase with the magnitude of planned savings. Another measure that could be a proxy for goal difficulty is monthly income. Presumably, saving the same amount should be more difficult for participants with lower than higher income. To examine the possible moderating role of these variables, we ran a full factorial regression model with specificity, BIF, planned savings amount, monthly income, and higher-level interactions between these factors as independent variables and anticipated success as the dependent variable. This analysis revealed the expected significant effect of the specificity  $\times$  BIF interaction ( $b = .22$ ,  $t = 2.03$ ,  $p < .05$ ). Most important, none of the other two-way, or higher-level, interactions reached significance.

Another way of looking at this issue involves examining the combined effects of planned savings amount and income on goal difficulty. It could be argued that saving a large amount for a high-income person and saving a small amount for a low-income person are of equal difficulty. To examine this issue, we calculated the ratio of planned savings amount to monthly income. In a regression analysis

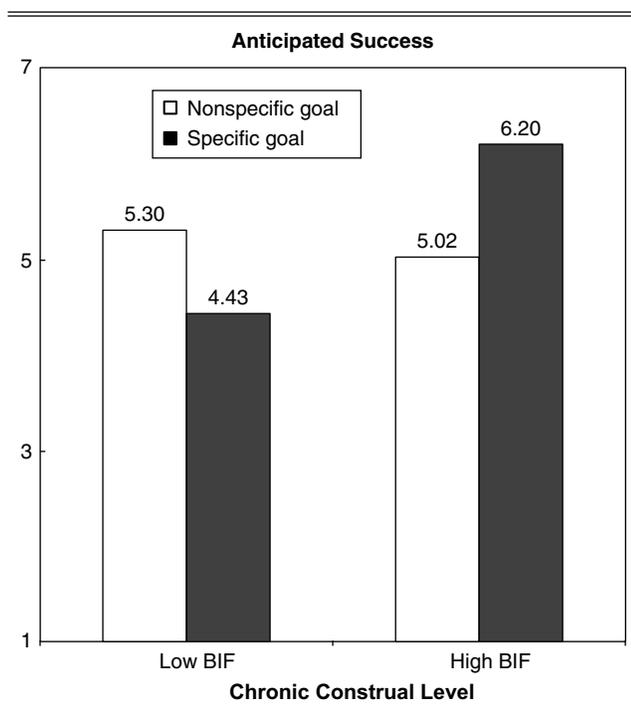
with specificity, BIF, amount/income ratio, and the higher-level interactions between these factors as independent variables and anticipated success as the dependent variable, the only significant factor was the interaction between specificity and BIF ( $b = .25$ ,  $t = 3.32$ ,  $p < .001$ ), as we expected. Together, these results suggest that for the range of goals reported by the participants, our findings hold regardless of the difficulty of the goal.

**Regulatory focus.** We coded participants' self-set goals as having either a promotion or a prevention focus. A majority of goals that participants articulated were promotion related (82%). A regression analysis with specificity, continuous BIF score, promotion/prevention focus, and the interaction terms as the independent variables and the anticipated success as the dependent variable revealed the expected significant two-way interaction between specificity and BIF ( $b = .17$ ,  $t = 2.47$ ,  $p < .05$ ). Importantly, neither the main effect of promotion/prevention focus ( $b = .40$ ,  $t = .75$ ,  $p > .10$ ) nor the three-way interaction ( $b = .03$ ,  $t = .75$ ,  $p > .10$ ) approached significance, suggesting that our results hold for both promotion and prevention goals.

**Abstractness of the goal.** We coded participants' goals in terms of their level of abstractness. To do this, we used findings from Canova, Rattazzi, and Webley (2005), who analyze the hierarchical structure of saving goals and assign abstractness scores [0, 1] to different goal types (e.g., projects: .53; purchases: .17), where higher scores indicate more abstract goals. When we regressed specificity, BIF score, and their interaction on this abstractness score, none of the terms reached significance ( $b_{\text{specificity}} = .02$ ,  $t = .18$ ,  $p = .86$ ;  $b_{\text{BIF}} = .002$ ,  $t = .32$ ,  $p = .75$ ;  $b_{\text{interaction}} = .003$ ,  $t = .42$ ,  $p = .68$ ), suggesting that chronically high- and low-level construers do not set different types of saving goals in the context of our study.

Figure 3

STUDY 2: CHRONIC CONSTRUAL LEVEL MODERATES THE EFFECT OF SPECIFICITY ON ANTICIPATED SUCCESS



### Discussion

The findings from Study 2 provide additional support for  $H_{1a}$  and  $H_{1b}$  using an individual-level measure of construal. By studying self-reported goals, we establish that the results hold for a spectrum of goals that for the participants range from relatively difficult to relatively easy. These results should be interpreted with the caveat that the goals studied have a limited range in terms of the planned savings amounts and therefore do not necessarily include extremely easy goals (e.g., save \$1 over the next six months). We also show that the results remain unchanged across promotion and prevention goals. Moreover, chronically high- and low-level construers do not set different types of goals; instead, they respond differently to the specificity of these goals.

### STUDY 3: ACTUAL SAVINGS

In Study 3, we move beyond anticipated savings and examine whether specificity and construal level influence the amount consumers actually save. To do this, we conduct a two-part study. We also examine the role of goal difficulty as inferred from participants' income.

#### Participants, Method, and Design

One hundred two undergraduate students participated in this study. Three participants who planned to save \$0 were excluded from the analyses, because people who do not have a saving goal are beyond the scope of this study.

The study consisted of two parts. In the first part, participants listed an occasion in the next month for which they intended to save money. We manipulated goal specificity as in the previous studies; half the participants listed the amount of money they would need to save for this occasion (specific), and the remaining participants did not do so (nonspecific). All participants then completed the BIF (Vallacher and Wegner 1989). One month later, participants completed the second part of the study. They indicated how much money they actually saved for the aforementioned occasion. Last, participants reported their monthly income.

### Results

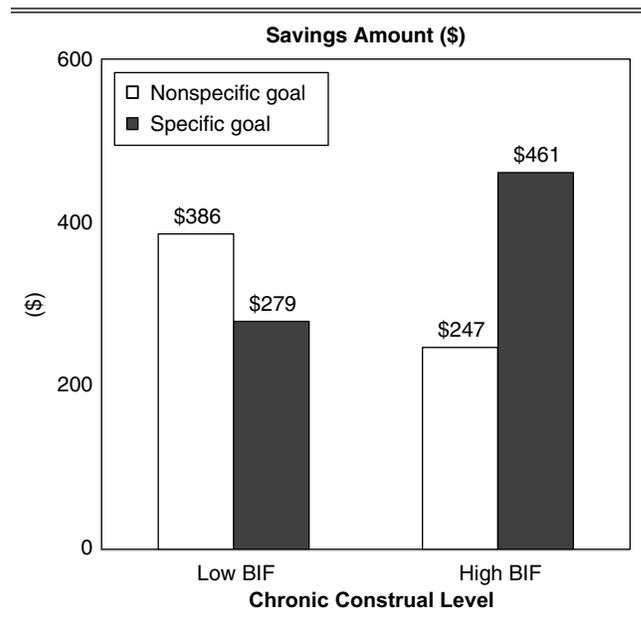
**Actual savings.** We log-transformed the reported savings (dollar) amounts and mean-centered all predictors. The pattern of results remains unchanged when these transformations are not performed. A regression analysis with specificity, continuous BIF score, income, and their higher-level interactions as predictors and log-transformed savings amount as the dependent variable revealed only an interaction between specificity and continuous BIF measure ( $b = -.26$ ,  $t = -2.54$ ,  $p = .01$ ). In line with our previous results on goal difficulty, neither the main effect of income nor its interactions with other factors reached significance. To explore the interaction, we examined the effects of specificity at one standard deviation above and below the mean. We mean-shifted the data to reflect values one standard deviation above and below the mean and conducted the analysis for an average-income person. The effect of specificity was positive at high BIF ( $b = .66$ ,  $t = 2.07$ ,  $p = .04$ ) and marginally negative at low BIF ( $b = -.55$ ,  $t = -1.71$ ,  $p = .09$ ). In addition, a spotlight analysis at one standard deviation above the mean BIF score showed that high-level construers saved more with specific than nonspecific goals ( $M_{\text{specific}} = 5.29$ ,  $M_{\text{nonspecific}} = 4.20$ ). A similar spotlight analysis at one standard deviation below the mean BIF score showed that low-level construers saved less with specific than nonspecific goals ( $M_{\text{specific}} = 3.81$ ,  $M_{\text{nonspecific}} = 5.13$ ). Figure 4 displays raw (dollar) means for ease of explication.

### Discussion

The results of Study 3 suggest that specificity and construal level influence consumers' self-reported actual savings, even when we control for the effects of goal difficulty. Chronic high-level construers save more when they have specific goals than nonspecific goals. This effect is reversed for low-level construers; they save more when they have nonspecific rather than specific goals. Thus, the results provide further support for  $H_{1a}$  and  $H_{1b}$ .

In the specific condition, participants reported the amount they planned to save, directly after indicating the savings occasion. A one-way ANOVA on this measure indicated that this amount does not differ across construal levels ( $M_{\text{high construal}} = \$395$ ,  $M_{\text{low construal}} = \$624$ ;  $F(1, 50) = 2.59$ ,  $p > .10$ ). Participants in the nonspecific condition reported this amount at the end of the study. Construal level did not significantly affect intended savings amounts in this condition either ( $M_{\text{high construal}} = \$431$ ,  $M_{\text{low construal}} = \$532$ ;  $F(1, 48) < 1$ ). Overall, actual savings fell short of planned amounts (see Web Appendix B at <http://www.marketingpower.com/jmrdec11>), except in the

Figure 4  
STUDY 3: EFFECT OF SPECIFICITY AND CONSTRUAL LEVEL ON ACTUAL SAVINGS



specific, high-level construal condition, in which the participants saved an average of \$153 more than the amount they planned to save.

### STUDY 4: INTERVENTION TO INCREASE SAVINGS

Previous studies have demonstrated that consumers' savings can be influenced by manipulating construal level and specificity. However, in practice, it might not be possible to use lengthy measurements or manipulations of construal level. Is there a simple procedure that financial advisers can easily use to (1) elicit a consumer's saving goal, (2) determine the level at which it is construed, and (3) guide the consumer to think more or less specifically about this goal? The aim of Study 4 is to identify such an intervention to increase consumers' savings.

Previous research has shown that temporal distance is a dimension of construal level, such that distant events are represented more abstractly (Trope and Liberman 2003). Accordingly, the time horizon of a saving goal should influence the level at which it is construed. Imagine two consumers who are both saving for their sons' wedding. The consumer who is saving for the wedding next year (next month) should construe this goal more abstractly (concretely). Thus, in this study, to assess construal level, we elicit the temporal distance of the saving occasion.

### Participants, Method, and Design

One hundred three participants recruited from an online panel completed the study in exchange for compensation. The median age of the participants was 32, ranging from 18 to 69 years.

In the beginning of the study, participants listed a saving occasion for which they wanted to save money. Next, they indicated the temporal distance of the occasion by

marking one of four multiple choice categories (less than three months, three to six months, six to nine months, and more than nine months). We manipulated goal specificity as in the previous studies. Next, participants completed the three-item anticipated success scale ( $\alpha = .92$ ). Finally, to determine whether the temporal distance reflected the construal level as intended, we asked participants to self-code their reported saving goals to indicate the type of goal.

### Results

*Construal level manipulation check.* We assigned an abstractness score to each goal type using the same procedure as in Study 2, such that higher scores indicate more abstract goals. As we expected, saving occasions that would take place in the distant future were construed more abstractly ( $r = .25, p < .01$ ).

*Anticipated success.* We mean-centered all predictors. A multiple regression analysis with specificity, temporal distance, the interaction between specificity and distance, and the monthly income as independent variables and anticipated success as the dependent variable revealed only the expected interaction between specificity and temporal distance ( $b = -.37, t = -3.39, p = .001$ ). To explore the interaction, we examined the effects of specificity at one standard deviation above and below the mean temporal distance. We mean-shifted the data to reflect values one standard deviation above and below the mean and conducted the analysis for an average-income person. The effect of specificity was positive and significant at distant future ( $b = .36, t = 1.94, p = .05$ ), while the effect of specificity was negative and significant at near future ( $b = -.53, t = -2.99, p = .003$ ). In addition, a spotlight analysis at one standard deviation above and below the mean temporal distance showed that for saving occasions in the distant future, consumers anticipated greater success with specific than nonspecific goals ( $M_{\text{specific}} = 5.68, M_{\text{nonspecific}} = 4.64$ ). In contrast, for saving occasions in the near future, consumers anticipated less success with specific than nonspecific goals ( $M_{\text{specific}} = 4.58, M_{\text{nonspecific}} = 5.29$ ).

### Discussion

Study 4 identifies a quick and practical intervention to increase consumers' savings. Financial advisers could use this procedure to elicit their clients' saving goals and time horizon and accordingly determine the appropriate level of specificity for them. These results highlight the importance of customizing financial advice to suit the characteristics of the individual consumer.

## GENERAL DISCUSSION

### Summary of Results

We examine the conditions under which specific (vs. nonspecific) saving goals facilitate and impede goal attainment, by exploring how the effect of specificity varies across low versus high levels of construal. Across four studies, we manipulate goal specificity, as done in prior research, by eliciting or not eliciting savings amounts. Manipulating construal level through a mind-set priming task (Study 1), measuring chronic differences (Studies 2 and 3), and assessing goal-related level of construal (Study 4) revealed a consistent pattern, in which construal

level moderates the effect of specificity on both anticipated and realized saving success. We find that specific goals lead to greater anticipated savings success for high-level construers, while nonspecific goals lead to greater anticipated success for low-level construers (Study 1). This effect is driven by perceptions of goal importance for high-level construers and motivational consequences of goal difficulty for low-level construers. High-level construers (who focus on why to perform an action) perceive specific goals as more important than nonspecific goals and therefore anticipate greater success for specific than nonspecific goals. We find that specificity also increases perceived goal difficulty, leading low-level construers (who focus on how to perform an action) to anticipate less success for specific than nonspecific goals. Study 2 shows that this effect stays constant across different kinds of saving goals. Study 3 highlights the implications by extending these findings to actual savings. Finally, Study 4 introduces an intervention that can be used to increase consumer savings.

### Relationship to Prior Literature

Our results are in line with previous findings that show that consumers can differentially interpret stimuli depending on their mind-set. For example, Cheema and Patrick (2008) examine framing of promotion redemption windows and show that consumers in an implemental (deliberative) mind-set perceive the expansive (restrictive) frame as more accommodating (precise) and, thus, more feasible (desirable) to use.

Construal level theory suggests that because self-control involves sacrificing short-term outcomes in favor of long-term outcomes, activation of high- (vs. low-) level construal leads to better self-control (Fujita et al. 2006). We do not find consistent evidence of this main effect in our data, except in Study 2. One potential explanation could be that prior investigations have focused on relatively specific goals, in which high- (vs. low-) level construal leads to better performance. We extend prior research by establishing conditions under which construing a goal at a high- (vs. a low-) level can be beneficial or detrimental to goal pursuit.

It could be argued that specific goals might be considered more concrete and nonspecific goals more abstract. If this were the case, we could propose a fit account, in which specific goals would fit better with low-level construal and nonspecific goals would fit better with high-level construal, leading to better savings performance in these cells. However, this account is not supported by our data. Analyses on our specificity manipulation check reveal that neither manipulated (Study 1) nor measured (Study 2) construal level influenced the level of specificity with which consumers thought about their saving goals.

It could also be argued that our results are due to participants setting difficult goals for themselves; perhaps for easy goals, specificity could make the goal seem more attainable for low-level construers. There are several reasons to believe that our results would manifest with both easy and difficult saving goals. First, in this article we chose to elicit participants' own goals rather than assigning them goals (Garland 1983; Locke and Latham 2006) because self-set goals are more common in natural consumer saving contexts. Previous literature has shown that self-set goals are often less challenging than assigned goals (Harkins and

Lowe 2000; Hinz, Kalnbach, and Lorentz 1997; Locke and Latham 1990). Second, the empirical results from Study 2 suggest that the effect remains unchanged across different levels of goal difficulty. However, note that the null effect of goal difficulty we observe could be due to the limited range of goals studied. Further research should address whether the demonstrated effects hold for extremely easy goals (e.g., save \$1 over the next month).

Consistent with prior literature, we define goal specificity as the ambiguity or diffuseness in the level of desired performance (Wright and Kacmar 1994). Thus, in the context of saving goals, we manipulate goal specificity by eliciting or not eliciting the amount to be saved for a saving occasion. In this sense, our manipulation influences the specificity of the outcome, rather than the process of reaching that outcome (Escalas and Luce 2003; Pham and Taylor 1999; Thompson, Hamilton, and Petrova 2009). In a different paradigm in which consumers specify the steps they will take to save, we would expect the beneficial effects of specificity to manifest unconditionally.

We find a close correspondence between anticipated (Studies 1, 2, and 4) and actual (Study 3) saving success. This does not mean that consumers can accurately predict their saving success. Instead, it indicates that our manipulations influence anticipated and realized success similarly. Our data suggest that the underlying process is perceptual and motivational, involving altered perceptions of difficulty and importance (which influence anticipated success) and leading to more or less commitment, consequently influencing goal achievement.

#### *Theoretical Contributions*

Prior research presents mixed evidence regarding the impact of goal specificity on goal attainment. While some research suggests that having specific goals facilitates goal attainment, other research highlights detrimental effects of goal specificity. We find that the effectiveness of goal specificity on goal performance is moderated by construal level—that is, how people think about these goals. Thus, we contribute to the literature by delineating the conditions under which goal specificity may facilitate and impede goal attainment. Moreover, we find that the level of construal determines consumers' performance with specific saving goals, by influencing (1) their perceptions of goal importance and (2) their motivational responses to goal difficulty. Therefore, we add to the theory by identifying the process by which specificity influences goal attainment.

#### *Managerial and Public Policy Implications*

Consumer savings is an important topic for multiple constituents, including consumers, governments, policy makers, banks, and financial advisers. Although it is clearly desirable to increase the amount consumers save, most efforts to this effect have used blanket approaches that treat all consumers the same. Despite popular wisdom that suggests that all consumers should have specific saving goals, our results show that different consumers need different strategies to increase their savings: Consumers with long-term saving goals are likely to construe this goal at a high level and therefore should benefit from specifying the amount they want to save. In contrast, consumers with short-term saving goals are likely to construe this goal at

a low level and should not think about the precise amount they want to save.

We show that it is possible to increase consumers' savings by changing the way they think about their saving goals. To determine the right saving advice, financial advisers could (1) manipulate level of construal, (2) assess chronic-level construal, or (3) determine goal-related level of construal. There are various ways to *manipulate* construal level that could easily be integrated into the routines of financial advisers. For example, making consumers think about their life in the near (vs. distant) future (Liberman and Trope 1998), using pictures (vs. words; Amit, Algom, and Trope 2009), and using language that involves more actions and verbs (vs. traits; Semin and Smith 1999) are all established methods of instilling low instead of high construal level.

Alternatively, financial advisers could *measure* chronic or goal-related construal level and accordingly offer customized advice to guide consumers to specific or nonspecific thinking. Chronic construal level could be measured using the BIF form (Vallacher and Wegner 1987), which could be offered to the consumers as a self-help tool to assess their saver type. In Study 4, we measured construal level by assessing the time horizon of saving goals. This approach has the advantage of being quick and straightforward (one question, as opposed to a 25-item scale) and therefore can effectively be used as an intervention to increase savings in the field.

In the spirit of using choice architecture to nudge consumers (Thaler and Sunstein 2008), our proposed intervention can be used to encourage consumers to increase personal savings in periods of economic growth. This intervention can also be used to decrease consumer savings and, consequently, to increase spending to stimulate the economy. Further research should examine the macrolevel effectiveness of the suggested intervention.

#### REFERENCES

- Ainslie, George and Nick Haslam (1992), "Self-Control," in *Choice Over Time*, G. Loewenstein and J. Elster, eds. New York: Sage Publications, 177–209.
- Amit, Elinor, Daniel Algom, and Yaacov Trope (2009), "Distance-Dependent Processing of Pictures and Words," *Journal of Experimental Psychology: General*, 138 (August), 400–415.
- Bandura, Albert and Karen M. Simon (1977), "The Role of Proximal Intentions in Self-Regulation of Refractory Behavior," *Cognitive Therapy and Research*, 1 (3), 177–93.
- Baumeister, Roy F. (2002), "Yielding to Temptation: Self-Control Failure, Impulsive Purchasing, and Consumer Behavior," *Journal of Consumer Research*, 28 (March), 670–76.
- Bem, Daryl J. (1967), "Self-Perception: An Alternative Interpretation of Cognitive Dissonance Phenomena," *Psychological Review*, 74 (May), 183–200.
- Benartzi, Shlomo and Richard H. Thaler (2004), "Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving," *Journal of Political Economy*, 112 (February), 164–87.
- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir (2006), "Behavioral Economics and Marketing in Aid of Decision Making Among the Poor," *Journal of Public Policy & Marketing*, 25 (Spring), 8–23.

- Botti, Simona and Sheena S. Iyengar (2006), "The Dark Side of Choice: When Choice Impairs Social Welfare," *Journal of Public Policy & Marketing*, 25 (Spring), 24–38.
- Briley, Donnel A. and Jennifer L. Aaker (2006), "Bridging the Culture Chasm: Ensuring That Consumers Are Healthy, Wealthy, and Wise," *Journal of Public Policy & Marketing*, 25 (Spring), 53–66.
- Canova, Luigina, Anna M. Rattazzi, and Paul Webley (2005), "The Hierarchical Structure of Saving Motives," *Journal of Economic Psychology*, 26 (February), 21–34.
- Carter, D. Bruce, Charlotte J. Patterson, and Susan J. Quasebarth (1979), "Development of Children's Use of Plans for Self-Control," *Cognitive Therapy and Research*, 3 (4), 407–413.
- Carver, Charles S. and Michael Scheier (1981), *Attention and Self-Regulation: A Control Theory Approach to Human Behavior*. New York: Springer-Verlag.
- Cheema, Amar and Vanessa M. Patrick (2008), "Anytime versus Only: Mind-Sets Moderate the Effect of Expansive versus Restrictive Frames on Promotion Evaluation," *Journal of Marketing Research*, 45 (August), 462–72.
- Diener, Ed, Marissa Diener, and Carol Diener (1995), "Factors Predicting the Subjective Well-Being of Nations," *Journal of Personality and Social Psychology*, 69 (November), 851–64.
- Escalas, Jennifer E. and Mary F. Luce (2003), "Process vs. Outcome Thought Focus and Advertising," *Journal of Consumer Psychology*, 13 (3), 246–54.
- Freitas, Antonio L., Peter M. Gollwitzer, and Yaacov Trope (2004), "The Influence of Abstract and Concrete Mindsets on Anticipating and Guiding Others' Self-Regulatory Efforts," *Journal of Experimental Social Psychology*, 40 (November), 739–52.
- Fujita, Kentaro, Yaacov Trope, Nira Liberman, and Maya Levin-Sagi (2006), "Construal Levels and Self-Control," *Journal of Personality and Social Psychology*, 90 (March), 351–67.
- Garland, Howard (1983), "Influence of Ability, Assigned Goals, and Normative Information on Personal Goals and Performance: A Challenge to the Goal Attainability Assumption," *Journal of Applied Psychology*, 68 (February), 20–30.
- Hall, Robert E. (1978), "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence," *Journal of Political Economy*, 86 (December), 971–87.
- Harkins, Stephen G. and Malia D. Lowe (2000), "The Effects of Self-Set Goals on Task Performance," *Journal of Applied Social Psychology*, 30 (January), 1–40.
- Hinsz, Verlin B., Lynn R. Kalnbach, and Nichole R. Lorentz (1997), "Using Judgmental Anchors to Establish Challenging Self-Set Goals Without Jeopardizing Commitment," *Organizational Behavior and Human Decision Processes*, 71 (September), 287–308.
- Hollenbeck, John R. and Howard J. Klein (1987), "Goal Commitment and the Goal-Setting Process: Problems, Prospects, and Proposals for Future Research," *Journal of Applied Psychology*, 72 (May), 212–20.
- Iyengar, Sheena S., Wei Jiang, and Gur Huberman (2004), "How Much Choice Is Too Much: Determinants of Individual Contributions in 401K Retirement Plans," in *Pension Design and Structure: New Lessons from Behavioral Finance*, Olivia S. Mitchell and Steve Utkus, eds. Oxford: Oxford University Press, 83–97.
- Kirschenbaum, Daniel S., Laura L. Humphrey, and Sheldon D. Malett (1981), "Specificity of Planning in Adult Self-Control: An Applied Investigation," *Journal of Personality and Social Psychology*, 40 (May), 941–50.
- Kotlikoff, Laurence J., Avia Spivak, and Lawrence H. Summers (1982), "The Adequacy of Savings," *American Economic Review*, 72 (December), 1056–1069.
- Lee, Angela Y., Punam Anand Keller, and Brian Sternthal (2010), "Value from Regulatory Construal Fit: The Persuasive Impact of Fit Between Consumer Goals and Message Concreteness," *Journal of Consumer Research*, 36 (February), 735–47.
- Liberman, Nira and Yaacov Trope (1998), "The Role of Feasibility and Desirability Considerations in Near and Distant Future Decisions: A Test of Temporal Construal Theory," *Journal of Personality and Social Psychology*, 75 (July), 5–18.
- Locke, Edwin A., Dong-Ok Chah, Scott Harrison, and Nancy Lustgarten (1989), "Separating the Effects of Goal Specificity from Goal Level," *Organizational Behavior and Human Decision Processes*, 43 (April), 270–87.
- and Gary P. Latham (1990), *A Theory of Goal Setting and Task Performance*. Englewood Cliffs, NJ: Prentice Hall.
- and ——— (2006), "New Directions in Goal-Setting Theory," *Current Directions in Psychological Science*, 15 (October), 265–68.
- Lynch, John G., Jr. and Gal Zauberman (2006), "When Do You Want It? Time, Decisions, and Public Policy," *Journal of Public Policy & Marketing*, 25 (Spring), 67–78.
- Madrian, Brigitte C. and Dennis F. Shea (2001), "The Power of Suggestion: Inertia in 401(K) Participation and Savings Behavior," *Quarterly Journal of Economics*, 116 (November), 1149–88.
- Mischel, Walter and C.J. Patterson (1976), "Substantive and Structural Elements of Effective Plans for Self-Control," *Journal of Personality and Social Psychology*, 34 (November), 942–50.
- Modigliani, Franco (1986), "Life Cycle, Individual Thrift, and the Wealth of Nations," *American Economic Review*, 76 (June), 297–313.
- Muller, Dominique, Charles M. Judd, and Vincent Y. Yzerbyt (2005), "When Moderation Is Mediated and Mediation Is Moderated," *Journal of Personality and Social Psychology*, 89 (December), 852–63.
- Naylor, James C. and Daniel R. Ilgen (1984), "Goal Setting: A Theoretical Analysis of a Motivational Technology," in *Research in Organizational Behavior*, Vol. 6, L. Cummings and B. Staw, eds. Greenwich, CT: JAI Press, 95–140.
- Pham, Lien and Shelley Taylor (1999), "From Thought to Action: Effects of Process- versus Outcome-Based Mental Simulations on Performance," *Personality and Social Psychology Bulletin*, 25 (February), 250–60.
- Preacher, Kristopher J. and Andrew F. Hayes (2008), "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models," *Behavior Research Methods*, 40 (August), 879–91.
- , Derek D. Rucker, and Andrew F. Hayes (2007), "Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions," *Multivariate Behavioral Research*, 42 (1), 185–227.
- Semin, Gün R. and Eliot R. Smith (1999), "Revisiting the Past and Back to the Future: Memory Systems and the Linguistic Representation of Social Events," *Journal of Personality and Social Psychology*, 76 (June), 877–92.
- Shefrin, Hershey M. and Richard H. Thaler (1988), "The Behavioral Life-Cycle Hypothesis," *Economic Inquiry*, 26 (October), 609–643.

- Soman, Dilip and Amar Cheema (2004), "When Goals Are Counterproductive: The Effects of Violation of a Behavioral Goal on Subsequent Performance," *Journal of Consumer Research*, 31 (June), 52–62.
- Thaler, Richard H. and Cass R. Sunstein (2008), *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, CT: Yale University Press.
- Thompson, Debora V., Rebecca W. Hamilton, and Petia K. Petrova (2009), "When Mental Simulation Hinders Behavior: The Effects of Process-Oriented Thinking on Decision Difficulty and Performance," *Journal of Consumer Research*, 36 (December), 562–74.
- Trope, Yaacov and Nira Liberman (2003), "Temporal Construal," *Psychological Review*, 110 (July), 403–421.
- Ülkümen, Gülden, Manoj Thomas, and Vicki G. Morwitz (2008), "Will I Spend More in 12 Months or a Year? The Effect of Ease of Estimation and Confidence on Budget Estimates," *Journal of Consumer Research*, 35 (August), 245–56.
- Vallacher, Robin R. and Daniel Wegner (1987), "What Do People Think They're Doing? Action Identification and Human Behavior," *Psychological Review*, 94 (January), 3–15.
- and ——— (1989), "Levels of Personal Agency: Individual Variation in Action Identification," *Journal of Personality and Social Psychology*, 57 (October), 660–71.
- Wilson, Timothy D., Douglas J. Lisle, Jonathan W. Schooler, Sara D. Hodges, Kristen J. Klaaren, and Suzanne J. LaFleur (1993), "Introspecting About Reasons Can Reduce Post-Choice Satisfaction," *Personality and Social Psychology Bulletin*, 19 (June), 331–39.
- Wright, Patrick M. and K. Michele Kacmar (1994), "Goal Specificity as a Determinant of Goal Commitment and Goal Change," *Organizational Behavior and Human Decision Processes*, 59 (August), 242–60.