

# Understanding Money-Back Guarantees: Cognitive, Affective, and Behavioral Outcomes

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## Abstract

Although money-back guarantees (MBGs) have a long tradition in marketing and retailing practice, a deeper understanding of how consumers value this instrument is still lacking. The results of two experimental studies show that in addition to cognitive effects, MBGs evoke a positive emotional response, thereby increasing consumers' purchase intentions and willingness to pay a price premium. Moreover, MBGs positively affect consumers' responses for search and experience goods, although for experience goods, MBGs should be designed with stricter return conditions as compared to MBGs for search goods. The results should help retail managers understand the consumer impact of MBGs, as well as assist them in pricing guaranteed items and designing effective MBGs according to the type of product.

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## Introduction

By offering a money-back guarantee (MBG), a seller promises that any customer who is not satisfied with a purchase can return the item within a certain period and receive a full refund (Davis, Gerstner, & Hagerty 1995). In response to intense competitive forces in business environments, especially during the recent recession, MBGs have been widely implemented by retailers and manufacturers as a promotional tool to gain consumers' attention and positively influence their purchase decisions (Sullivan 2009). Thus, firms are increasingly taking advantage of MBGs, even though empirical investigations about MBG outcomes on consumer behavior remain insufficient (d'Astous and Guèvremont 2008).

Several authors argue that MBGs serve as extrinsic cues of quality (e.g., Moorthy & Srinivasan 1995; Shieh 1996), reduce consumers' perceived risk (Grewal et al. 2003; Heiman, McWilliams, & Zilberman 2001; Lei, de Ruyter, & Wetzels

2008), increase consumer satisfaction (e.g., McCollough & Gremler 2004), and enhance purchase intentions (e.g., Davis et al. 1995; Wood 2001). Yet despite these various effects analyzed in previous research, important gaps in literature remain.

In response, this article offers four contributions to retailing and marketing literature. First, we extend previous research on MBGs that has focused on cognitive variables such as quality or risk perceptions, by examining their impact on affective outcomes. We therefore respond to Chandon, Wansink, and Laurent (2000) claim that promotions offer both utilitarian and hedonic benefits. Furthermore, investigating emotions is important because cognitive models only provide partial explanations for responses to promotions (Erevelles 1998), and affective influences appear more important than previously believed (e.g., Bagozzi, Gopinath, & Nyer 1999), especially for retailing (Puccinelli et al. 2009). To begin exploring the role of emotions in an MBG context, we restrict our investigation to one negative and one positive emotion that could both mediate MBG effects on important consumer outcomes. Specifically, the focus is on anticipated regret and liking, two emotions that strongly affect consumer behavior (Kaltcheva & Weitz 2006; Simonson 1992).

Second, MBGs might increase profits by increasing consumers' willingness to pay a price premium (WTP), an effect that has been discussed only theoretically (Fruchter & Gerstner 1999), despite calls for empirical investigations into both this

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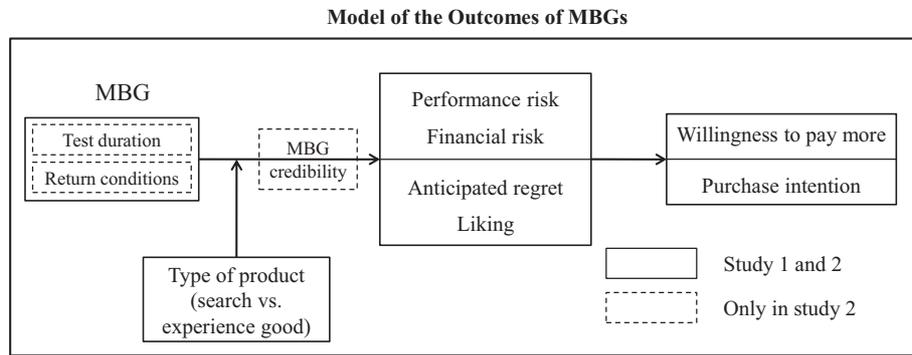


Fig. 1. Model of the outcomes of MBGs.

specific relationship (Hogreve & Gremler 2009) and the variables that affect WTP in general (Chaudhuri & Ligas 2009). We investigate MBG effects on consumers' WTP, as mediated through risk perceptions and emotions based on equity theory. From an academic perspective, we gain new insights into whether and how MBGs affect consumers' WTP. From a managerial perspective, the greater understanding of the relationship between the presence of an MBG and WTP helps managers price guaranteed items to achieve higher margins.

Third, we note a lack of research on the effectiveness of different MBG designs (Hogreve & Gremler 2009), which vary in terms of the conditions for returning a product (i.e., what customers must do to get their money back) and duration (i.e., the period during which an item can be returned). Although both design elements are critical for consumers' decision making (Heiman et al. 2002), research has not examined the behavioral outcomes of variations in MBG designs. To reduce customer cheating, some researchers have proposed implementing higher "hurdles" in the form of more restrictive guarantee designs (e.g., Chu, Gerstner, & Hess 1998), as marketing practice often does (Heiman et al. 2001). According to Anderson, Hansen, and Simester (2009) restrictive MBG designs can reduce the \$100 billion product return costs retailers and manufacturers face each year by offering return policies. However, restrictively designed return policies also might have negative effects on consumer evaluations, leading to less demand (Anderson et al. 2009). The literature on low price guarantees<sup>3</sup> (e.g., Kukar-Kinney, Walters, & MacKenzie 2007; Kukar-Kinney, Xia, & Monroe 2007) reveals that the credibility of a guarantee suffers when it is restrictive. Considering the strong impact of a signal's credibility on consumer behavior (Ho, Ganesan, & Oppewal 2011; Kukar-Kinney & Walters 2003), we suggest that MBG credibility – or the extent to which the message the MBG transmits is believed – should be examined as a key mediator of MBG design effects on consumer behavior.

Fourth, empirical research on MBGs has not investigated the type of products for which they are most effective. This issue is important because the impact of promotional tools on consumer behavior varies across product types (Huang, Lurie,

& Mitra 2009). We categorize products according to Nelson's (1974) search versus experience goods classification, which has a long tradition in marketing literature. Research has stressed the importance of extrinsic cues (e.g., MBG) to lower prepurchase uncertainty, especially in the presence of experience qualities (Huang et al. 2009). In contrast, in the case of search goods, consumers might value an MBG less. By analyzing consumers' cognitions and emotions, we investigate whether it makes sense to offer MBGs for search goods. With these results, managers can make better decisions about whether to provide an MBG in a specific product category and how to design MBGs according to the level of risk involved.

*Overview of our experimental studies.* To address the identified research gaps, we conducted two experimental studies (see Fig. 1). In Study 1, we test the general outcomes of an MBG and examine its effects on consumers' cognitions, affect, and intentions. In particular, we investigate whether risk perceptions (i.e., performance and financial risk) and emotions (i.e., anticipated regret and liking) mediate the MBG effects on consumers' WTP and purchase intentions. Furthermore, we analyze the type of product (i.e., search vs. experience good) as a key moderator of these consumer behavior outcomes. Then in Study 2, we investigate whether variations in MBG terms affect these responses differently and examine MBG credibility as an important mediator variable.

### Study 1: General impact of a money-back guarantee

#### *Impact on risk perceptions*

The concept of risk plays an important role in understanding consumer decision making (Mitchell 1999). Because consumers sometimes want to avoid making mistakes, rather than just maximizing their utility, perceived risk often prevents them from purchasing (Mitchell 1999). Therefore, it is essential for a seller to offer information that reduces their perceived risk to a level that is acceptable to the consumer (Bettman 1973). We focus on performance and financial risk because research has documented their high relevance for consumer decision making (Agarwal & Teas 2001). Moreover, performance and financial risk effectively explain variance in overall risk (Kaplan, Szybillo, & Jacoby 1974).

<sup>3</sup> A low price guarantee is a tool similar to an MBG, though it only addresses consumers' price dissatisfaction.

Performance risk arises when a consumer believes that a purchased item may perform below expectations (Horton 1976). According to Shimp and Bearden (1982, p. 39), “higher perceived quality may serve to mitigate the risk that accompanies the uncertainty of whether a . . . product will satisfactorily perform its intended function.” Prior research has indicated that MBGs can increase quality perceptions (e.g., Moorthy & Srinivasan 1995), according to the following reasoning: When a seller provides an MBG, it promises to pay back the amount of the purchase price if the consumer is not satisfied with the product. Thus, the offer implies a self-imposed penalty for bad performance, meaning that it would be economically unwise for sellers of low-quality products to provide an MBG, because they would incur higher return costs (Kirmani & Rao 2000; Mitra & Fay 2010). Therefore, offering an MBG communicates high product quality and thereby reduces performance risk perceptions.<sup>4</sup>

Financial risk refers to the consumer’s potential financial loss associated with the purchase, including the possibility that the product must be repaired or replaced (Horton 1976). Because product repairs or replacements depend on product quality, the argument is similar to that of performance risk: An MBG that signals product quality also reduces financial risk. Furthermore, MBGs ensure that the customer will not suffer financial losses if she or he is dissatisfied with the product or finds the same item for a lower price postpurchase at another retailer. Thus MBGs should reduce financial risk perceptions.

#### *Impact on emotions*

Researchers and marketers appear increasingly interested in studying the role of emotions in consumer behavior, including the context of promotions (Chandon et al. 2000). Emotions are frequently classified into independent negative and positive dimensions, which consumers may feel simultaneously (Ramanathan & Williams 2007).

We propose that the negative emotion of regret, which occurs when a consumer realizes that she or he would be better off having made a different purchase decision, has major relevance in an MBG context, because an MBG can eliminate negative purchase consequences during the trial period. Research shows that regret can be anticipated before purchase and plays an important role in consumer decision making (e.g., Shih & Schau 2011; Zeelenberg & Pieters 1999). Specifically, to avoid regret, consumers rely on diverse informational cues. For example, Simonson (1992) finds that consumers tend to favor well-known and higher-priced brands when they anticipate regret. Moreover, Tsiros and Mittal (2000) find that regret is lower in the case of reversible compared with irreversible outcomes. Considering the informational role of an MBG in prepurchase situations and the opportunity it

offers to reverse a purchase, we propose that an MBG reduces the anticipation of regret.

Furthermore, we postulate that an MBG can evoke the positive emotion of liking, an affective variable frequently studied in sales promotion research (e.g., Lichtenstein, Burton, & Netemeyer 1997; Naylor, Raghunathan, & Ramanathan 2006). According to Roseman’s (1991) appraisal theory, liking occurs when the subject can gain a personal advantage from someone else (e.g., seller). For example, consumers value greater flexibility when making choices (Wood 2001). An MBG provides greater flexibility in a choice task because it offers the option to postpone the final purchase decision. In other words, irreversibility of the purchase is not determined at the time of purchase but at the end of the MBG test duration. Thus, an MBG creates an advantage in the purchase context and in line with Roseman (1991), may therefore evoke the positive emotion of liking.

#### *Impact on consumers’ willingness to pay a price premium*

We assume that an MBG increases consumers’ WTP by affecting their risk perceptions and emotions. To explain this indirect effect, we apply equity theory which helps us understand how informational cues lead to perceptions of fairness. According to equity theory, fairness perceptions arise when exchange partners believe that the ratios of what they invest or sacrifice relative to what they receive (i.e., their cost–benefit ratios) are equal across partners (Adams 1965; Oliver & Swan 1989). In the case of positive or negative inequity (i.e., the ratio for one partner is higher or lower than the other’s), both partners will be motivated to change the exchange parameters to reestablish equity (Homburg, Koschate, & Hoyer 2005).

Because an MBG should reduce the consumer’s risk perceptions, the cost side of the consumer’s cost–benefit ratio decreases (i.e., as anticipated future costs, risk enters the cost side of the ratio; Zeithaml 1988). Furthermore, the benefit side of the ratio increases because the MBG evokes a positive emotional response. Thus, assuming the purchase price of the product remains constant, the consumer’s cost–benefit ratio improves compared with a situation with no MBG. In contrast, the seller incurs costs when offering an MBG (e.g., restocking, depreciation of returned items). Although a seller strives for benefits from offering the MBG such as additional sales, the total effect on its cost–benefit ratio is unclear (Anderson et al. 2009). Thus the seller might incur negative inequity while the consumer incurs positive inequity.

By demanding a price premium for the MBG, the seller can reestablish transaction equity. A higher price should seem fair up to the level that equalizes the cost–benefit ratio of the seller and the consumer. Because an MBG reduces risk perceptions and generates more positive emotional responses, the consumer might be willing to accept higher prices when the seller provides an MBG. In turn, we predict an indirect effect of an MBG, through risk perceptions and emotions, on WTP and hypothesize:

**H<sub>1a</sub>.** By reducing (i) performance risk and (ii) financial risk, an MBG increases WTP.

<sup>4</sup> In our empirical studies we focus on risk perceptions and not on quality perceptions (compare Fig. 1), first, to keep our model parsimonious, and, second, because the reduction of risk perceptions is assumed to be a central outcome of an MBG having important implications for consumer behavior (e.g., Grewal et al. 2003; Heiman et al. 2001).

**H<sub>1b</sub>.** By reducing (i) anticipated regret and increasing (ii) liking, an MBG increases WTP.

#### *Impact on consumers' purchase intentions*

We also propose that an MBG increases consumers' purchase intentions by affecting their risk perceptions and emotions. First, prior research has shown that risk perceptions negatively influence behavioral intentions (e.g., Bearden & Shimp 1982). More specifically, the belief that an MBG results in lower performance and financial risk should induce the consumer to form a more favorable attitude toward buying the guaranteed item, which leads to a stronger purchase intention (Fishbein & Ajzen 1975).

Second, according to Schwarz and Clore (1983), people base their intentions toward an object on the self-referencing heuristic: How-do-I-feel-about-it? Negative emotions lead to an unfavorable evaluation, positive emotions lead to a favorable evaluation, and they consistently influence intentions toward the object (Pham 1998). Applying the How-do-I-feel-about-it? heuristic here, we suggest that an MBG may avoid an unfavorable evaluation of the product offer by reducing the negative emotion of anticipated regret and induce a favorable evaluation by evoking the positive emotion of liking. In so doing, the MBG should increase purchase intentions. Thus we hypothesize:

**H<sub>2a</sub>.** By reducing (i) performance risk and (ii) financial risk, an MBG increases purchase intentions.

**H<sub>2b</sub>.** By reducing (i) anticipated regret and increasing (ii) liking, an MBG increases purchase intentions.

#### *Moderating effects of type of product*

We assume that an MBG has a stronger effect for experience goods compared with search goods in terms of risk reduction. Because the evaluation of experience goods is inherently more subjective, less diagnostic, and more difficult than that of search goods (Hoch & Deighton 1989), consumer risk is necessarily greater for experience goods. According to Ostrom and Iacobucci (1998), the impact of a guarantee on consumer evaluations might be stronger when the risk level increases. An MBG enables the consumer to test the product and verify its characteristics which is especially valuable for experience goods. Thus risk perceptions can be significantly reduced for experience goods. In contrast, a search good's prepurchase uncertainty is relatively lower because consumers can evaluate these products before purchase. Thus risk reduction is only minimal for search goods.

Furthermore, we assume that an MBG has a stronger effect for experience goods in terms of the emotional response. With an MBG, consumers can test the product and "update" their information. This option has great importance in the case of experience goods and makes the consumer feel better about a purchase decision. That is, the consumer should anticipate less regret and like the offer more when the seller provides an MBG for goods whose quality is hard to predict. We derive:

Table 1  
Search and experience goods classifications.

Good	Mean (experience–search good) <sup>a</sup>		
	Pretest	Study 1	Study 2
Vitamin pills <sup>b</sup>	–1.03	–.32	–.42
Washing machine <sup>b</sup>	–.83	–1.08	–.47
Printer <sup>b</sup>	–.59	–.99	–.54
Television set	–.37		
Printer paper	–.33		
Detergent	–.29		
Insect repellent	–.28		
Electric toothbrush	–.19		
Digital camera <sup>b</sup>	–.18	1.14	–.11
Coffee machine	.12		
Car navigation system	.18		
Mobile phone	.27		
Face cream	.39		
MP3 player	.46		
Probiotic yogurt	.49		
Anti-dandruff shampoo <sup>b</sup>	.51	.67	.94
Mattress <sup>b</sup>	.71	2.18	2.89
Ski jacket	.74		
Running shoes	.99		
Skier	1.05		
Office chair <sup>b</sup>	1.22	2.00	2.15
Ski boots <sup>b</sup>	1.23	1.88	2.01

<sup>a</sup> Higher values represent more experience attributes.

<sup>b</sup> Products included in Study 1 and Study 2.

**H<sub>3a</sub>.** The effects of an MBG on (i) performance risk and (ii) financial risk are stronger for experience goods than for search goods.

**H<sub>3b</sub>.** The effects of an MBG on (i) anticipated regret and (ii) liking are stronger for experience goods than for search goods.

Based on H<sub>3a,b</sub> and the mediations specified in H<sub>1</sub> (an MBG affects WTP via risk perceptions and emotions) and H<sub>2</sub> (an MBG affects purchase intentions via risk perceptions and emotions), we further suggest the following hypotheses:

**H<sub>3c</sub>.** The indirect effect of an MBG on WTP is stronger for experience goods than for search goods.

**H<sub>3d</sub>.** The indirect effect of an MBG on purchase intentions is stronger for experience goods than for search goods.

#### *Method*

*Pretest of products.* We conducted a pretest of 22 products to select those perceived as either search goods or experience goods (see Table 1). A representative sample of 160 German consumers took part in the pretest.

Each participant rated five 7-point Likert scale items for each product: Three to assess experience qualities and two to assess search qualities. We adapted the items from Weathers, Sharma, and Wood (2007; see Appendix A). We randomly allocated products across participants using an online questionnaire. To avoid response fatigue, each participant evaluated only three products. We averaged the results to create measures of experience and search qualities. Next, we computed the

Example of a Stimuli in Study 1 (Translated from German)



Fig. 2. Example of a stimulus in Study 1 (Translated from German).

difference between these measures. Positive values in Table 1 indicate that a good contains mainly experience qualities, and negative values represent a good that contains mainly search qualities.

We selected only products with highly positive or highly negative mean differences, which fit our requirements for heterogeneous price levels and product categories. Accordingly, we chose a mattress, an office chair, an anti-dandruff shampoo, and ski boots as experience goods and vitamin pills, a washing machine, a digital camera, and a printer as search goods. The price levels of these products were not equal *within* product categories but were approximately equal *across* product categories, because for each experience good, we chose a search good that was equivalent in terms of price. The experimental studies thus feature four search and four experience goods whose pretest means differed significantly ( $M_{\text{experience}} = 1.22$ ,  $M_{\text{search}} = -.82$ ;  $p < .01$ , two-tailed).

**Sample and experimental design.** A large market research firm specializing in online panels provided the sample for Study 1. The firm possesses representative national databases that consist of consumers who have agreed to participate in surveys in exchange for cash incentives. The final sample in Study 1 consists of 200 consumers and is representative of the German market in terms of gender, age, and income.

To test  $H_1$ – $H_3$ , we used a 2 (MBG present vs. absent)  $\times$  2 (search vs. experience good) between-subjects factorial design. Within an online survey, participants were randomly assigned to one of the four treatment conditions, each represented by a section of a firm's advertising brochure that contained one of the eight products.<sup>5</sup> We manipulated the MBG-present condition by inserting the following statement (see also Fig. 2): "Money-Back

Guarantee: Test our [name of search or experience good] for 30 days. If you are not satisfied with your purchase we give you your money back-guaranteed!" In addition, to make the scenario more realistic, an "MBG logo" appeared. Half the respondents saw the same advertisement but without an MBG. Furthermore, we provided product information for the search and experience goods. This information described the product in the specific category, chosen by screening vast print and online media. We used fictitious brand names to remove any confounds due to prior brand perceptions. However, we provided price information so that participants could indicate their purchase intentions and WTP. We chose an average price level for each product to minimize price-oriented quality evaluations. All additional information was constant across the four treatments. To ensure that the additional information given in the advertisement did not affect the results of the final estimation, we controlled for perceived information content (i.e., information to be transmitted by the advertisement beyond the MBG). We also controlled for participants' knowledge in the specific product category (see Appendix A).

**Measures and manipulation checks.** To measure the constructs of interest, participants responded to a series of multi-item Likert scales. We measured performance and financial risk perceptions using three items each, based on Shimp and Bearden's (1982) scale. We measured anticipated regret with three items adapted from Tsiros and Mittal (2000) and Shih and Schau (2011). For liking, we selected three items from a scale by Tripp, Jensen, and Carlson (1994). We assessed WTP with three items from Zeithaml, Berry, and Parasuraman (1996) and Fuchs, Prandelli, and Schreier (2010). Purchase intentions was measured using the scale that Grewal, Monroe, and Krishnan (1998) developed. Table 2 lists all items and displays the psychometric properties, means, and standard deviations of the measures.

Each construct demonstrated good psychometric properties in terms of composite reliability (CR) and average variance extracted (AVE); no CR was lower than .8, and no AVE was lower than .7 (Bagozzi & Yi 1988) which indicates the sufficient reliability and convergent validity of the construct operationalizations (though one item of the WTP factor needed to be dropped due to very low factor loadings). The goodness-of-fit indices for the measurement model yielded good results ( $\chi^2 = 177.62$ ,  $df = 104$ , confirmatory fit index [CFI] = .98; root mean square error of approximation [RMSEA] = .06; square root mean residual [SRMR] = .03). We assessed discriminant validity in two ways. First, we evaluated discriminant validity using Fornell and Larcker's (1981) procedure. As Table 3 shows, the square root of the AVE for every factor was always greater than the highest correlation between two constructs, indicating discriminant validity. Second, each correlation between two variables was constrained to equal 1, and then we examined any differences in the chi-square values between the constrained and unconstrained models (Anderson & Gerbing 1988). Significant test statistics ( $p < .05$ ) confirm discriminant validity. We also analyzed whether the measurement model was robust to common method variance using a single-method factor approach (Podsakoff et al. 2003). We compared a single-factor solution

<sup>5</sup> We pooled the results of the eight products across the two product categories, as we show in the section of the manipulation checks. We thus could work with a binary product category variable.

Table 2  
Construct descriptions and final measures.

Constructs	Item descriptions <sup>a</sup>	<i>M</i> ( <i>SD</i> ) <sup>b</sup>	Factor loadings <sup>b</sup>	CR <sup>b</sup>	AVE <sup>b</sup>
Performance risk	1. Considering possible problems with the product's performance, how much risk would be involved with buying this product? ("very low risk/very high risk")	3.42 (1.32)	.939/.936	.932/.932	.821/.822
	2. How sure are you about the product's ability to perform? ("very sure/not sure at all")	3.57 (1.35)			
	3. I am very confident that the product will perform as expected.		.935/.932		
Financial risk	1. Given the potential financial expenses, how much risk would be involved buying this product? ("very low risk/very high risk")	3.25 (1.72)	.888/.863	.941/.919	.841/.791
	2. How financially risky do you feel it would be to choose the product? ("not risky at all/very risky")	2.99 (1.56)			
	3. I think the purchase of the product is financially risky.		.960/.946		
Anticipated regret	1. Using this offer could be a decision that I will later regret.	3.39 (1.51)	.949/.947	.959/.966	.887/.905
	2. I might later feel regret accepting this offer.	3.33 (1.66)			
	3. It is quite possible that I later regret the decision to accept this offer.		.940/.972		
Liking	1. I like this offer.	4.23 (1.48)	.904/.891	.965/.959	.902/.885
	2. Accepting this offer would give me pleasure.	3.97 (1.54)			
	3. I would enjoy this offer.		.971/.965		
WTP	1. For this offer I would be willing to pay a higher price.	4.05 (1.48)	.821/.870	.881/.910	.788/.834
	2. I would still buy the product even if the seller increases the price.	2.66 (1.43)			
Purchase intention	1. If I were going to buy a ____, the probability of buying this one is likely to be ... ("very low/very high")	4.06 (1.57)	.872/.882	.943/.954	.846/.873
	2. The probability that I would consider buying this ____ is ... ("very low/very high")	3.84 (1.61)			
	3. The likelihood that I would purchase this ____ is ... ("very low/very high")		.926/.961		
MBG credibility	1. The MBG is believable.	–	–.939	–.965	–.933
	2. The MBG is credible.	4.43 (1.68)	–.992		

<sup>a</sup> Scales not specifically defined used "totally disagree/totally agree" as anchors.

<sup>b</sup> First (pair of) values refer to Study 1, and second (pair of) values refer to Study 2.

in which all manifest variables could be represented by a single factor with a model in which the manifest variables were represented by each corresponding construct. The chi-square test statistic revealed a significantly lower fit for the single-factor solution, indicating that the measures were robust to common method variance ( $\Delta\chi^2 = 1611.57$ ;  $\Delta df = 15$ ).

We assessed the MBG manipulation by asking respondents to indicate whether the advertisement included an MBG (Biswas, Dutta, & Pullig 2006; see Appendix A). Overall 93 percent of the participants responded to the manipulation check correctly.<sup>6</sup> Using the same items as in the pretest, participants also evaluated the search and experience qualities of the eight products (Table 1). Because one product (digital camera) failed the check for search qualities, we excluded it from further analysis.

To assess whether it is appropriate to aggregate the results across goods within the search and experience goods categories, we first conducted a MANOVA and follow-up ANOVAs for each category, with product and MBG as independent variables and risk perceptions, emotions, WTP, and purchase intentions as dependent variables. In neither category do we find significant

interactions between product and MBG on the multivariate level (search:  $F = .728$ ,  $p = .88$ ; experience:  $F = 1.280$ ,  $p = .11$ ) and the univariate levels (the F-statistic for each dependent variable is nonsignificant;  $p > .10$ ). Second, we also controlled whether products might differ in other aspects important for the purchase decision. Pooled within each category, search and experience goods did not differ significantly in respondents' knowledge in the specific product category ( $p = .273$ , two-tailed), product involvement ( $p = .103$ , two-tailed), or utilitarian perception ( $p = .715$ , two-tailed). However, they differed in their hedonic perception ( $p = .073$ , two-tailed), which was not intended, and their inherent risk ( $p = .002$ , two-tailed), with experience goods scoring higher on this criterion, which was intended. Including hedonic perception (and product involvement, as significance for this variable is ambiguous) in the path model did not show any significant effects on the dependent variables, supporting the pooling of the data across products to create search and experience goods categories.

*Procedure.* Before answering the questionnaire, participants provided demographic information. Then they were exposed to the treatment conditions (i.e., an advertisement with one of the eight products including or excluding MBG information), rated the dependent variables (i.e., performance and financial risk perceptions, regret and liking, WTP, and purchase intention), completed manipulation checks, and responded to controls.

<sup>6</sup> The respondents answered as follows: MBG-condition: correct = 83; false = 9; No-MBG-condition: correct = 96; false = 12.

Table 3  
Correlations of main constructs (Study 1 and Study 2).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 MBG credibility	–	<b>.965</b>												
2 Performance risk	–	<b>.906</b>												
3 Financial risk	–	<i>.047</i>	<b>.917</b>											
4 Regret	–	<i>.073</i>	<b>.889</b>	<b>.941</b>										
5 Liking	–	<i>–.097</i>	<i>–.027</i>	<i>–.069</i>	<b>.949</b>									
6 WTP	–	<i>–.288</i>	<i>–.190</i>	<i>.029</i>	<i>.192</i>	<b>.887</b>								
7 Purchase intention	–	<i>–.319</i>	<i>–.052</i>	<i>–.162</i>	<i>.437</i>	<b>.913</b>								
8 Guarantee	–	<i>–.238</i>	<i>–.190</i>	<i>–.169</i>	<i>.200</i>	<i>.091</i>	<i>.247</i>	–						
9 Search/Experience (SE)	–	<i>.210</i>	<i>.230</i>	<i>.228</i>	<i>–.164</i>	<i>–.225</i>	<i>–.347</i>	<i>–.003</i>	–					
10 Guarantee × SE	–	<i>.068</i>	<i>.010</i>	<i>.011</i>	<i>–.072</i>	<i>–.156</i>	<i>–.174</i>	–	–					
11 Test duration (TD)	–	<i>.063</i>	<i>–.182</i>	<i>.063</i>	<i>.002</i>	<i>–.015</i>	<i>–.002</i>	<i>.478</i>	<i>.378</i>	–				
12 Return conditions (RC)	–	–	–	–	–	–	–	–	–	–	–	–	–	–
13 TD × SE	–	<i>–.128</i>	<i>.184</i>	<i>.063</i>	<i>.116</i>	<i>–.192</i>	<i>–.207</i>	<i>–.156</i>	–	<i>.079</i>	–	–	–	–
14 RC × SE	–	<i>–.539</i>	<i>.298</i>	<i>.128</i>	<i>.202</i>	<i>–.296</i>	<i>–.242</i>	<i>–.323</i>	–	<i>.063</i>	–	<i>.390</i>	–	–
	–	<i>–.128</i>	<i>.085</i>	<i>.023</i>	<i>.026</i>	<i>–.085</i>	<i>–.166</i>	<i>–.173</i>	–	<i>.928</i>	–	<i>.232</i>	<i>.105</i>	–
	–	<i>–.095</i>	<i>.068</i>	<i>.012</i>	<i>.016</i>	<i>–.071</i>	<i>–.149</i>	<i>–.168</i>	–	<i>.906</i>	–	<i>.124</i>	<i>.198</i>	<i>.886</i>

Notes. Values of Study 1 in italics; diagonal elements root mean square of AVE.

### Results

We used structural equation modeling to test our hypotheses. The analysis was conducted by employing the ML-estimator as implemented in MPLUS 5.2. The overall fit of the model is acceptable ( $\chi^2 = 460.63$ ,  $df = 185$ ; CFI = .92; RMSEA = .09; SRMR = .160).

The values in Table 4 show that, as expected, an MBG reduces performance risk, financial risk, and anticipated regret and increases liking to significant degrees. Using the bootstrapping procedure as a mediation test (Preacher & Hayes 2008), we find significant indirect effects of the MBG on WTP and purchase intentions (see Table 4), emphasizing the general importance of the suggested mediators for the analysis of MBG outcomes. The total indirect effect on WTP is positive and significant (.064; critical ratio [Z] = 2.64). Specifically, we find significant scores through performance risk (.023; Z = 1.29) and liking (.040; Z = 1.74). All other indirect paths are nonsignificant. These results support H<sub>1ai</sub> and H<sub>1bii</sub>.

The total indirect effect of the guarantee on purchase intentions is also significant (.176; Z = 3.53). The results in Table 4 and the bootstrapping results indicate significant indirect effects through performance (.030; Z = 1.68) and financial risk perceptions (.012; Z = 1.28) as well as through liking (.131; Z = 3.28). Thus, H<sub>2ai</sub>, H<sub>2aii</sub>, and H<sub>2bii</sub> are supported. Because the indirect paths from MBG to WTP and purchase intentions through liking

explain a larger portion of the variance than all other paths, our data highlight the central role of positive emotions in the MBG context. In contrast, among the suggested mediators anticipated regret is of least importance and the hypotheses regarding this variable, namely H<sub>1bi</sub> and H<sub>2bi</sub>, need to be rejected. Comparing the indirect effects of the guarantee on WTP with those on purchase intentions we identify that the paths on purchase intentions in sum explain a greater share of the variance compared to the paths on WTP (.176 vs. .064).

For H<sub>3a,b</sub>, we proposed that the effects of the guarantee on the mediators would be stronger for experience goods compared with search goods. As we detect significant negative effects of the interaction between the MBG and the search and experience goods measure on financial risk ( $\beta = -.257$ ,  $t = -3.34$ ) and regret ( $\beta = -.110$ ,  $t = -1.62$ ), H<sub>3aii</sub> and H<sub>3bii</sub> are supported. This means that an MBG more strongly reduces financial risk perceptions and anticipated regret for experience goods relative to search goods. Considering the intentional outcomes (H<sub>3c,d</sub>), the indirect paths through financial risk shows a significant Z-score for both WTP (.035; Z = 1.47) and purchase intentions (.030; Z = 1.69), signifying a mediation of the interaction terms' impact through financial risk. The values reveal a greater indirect effect of an MBG on WTP and purchase intentions for experience goods compared with search goods, supporting H<sub>3c</sub> and H<sub>3d</sub>. This effect is mainly driven by the stronger reduction of financial risk for experience goods.

Table 4  
Results of the direct and indirect effects.

Path	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>		Model 4 <sup>d</sup>		Hypothesis supported
	Coefficient	T-value	Coefficient	T-value	Coefficient	T-value	Coefficient	T-value	
MBG → performance risk			-.175	-2.72***			-.169	-2.65***	
MBG → financial risk			-.103	-1.68**			-.103	-1.68**	
MBG → regret			-.115	-1.82***			-.116	-1.85**	
MBG → liking			.231	3.72***			.224	3.60***	
MBG → WTP	.138	2.06**			.007	.110	.009	.142	
MBG → purchase intentions (PI)	.295	4.88***			.040	.558	.062	1.29*	
MBG × SE → performance risk			.081	1.16			.075	1.07	H <sub>3ai</sub> : no
MBG × SE → financial risk			-.257	-3.34***			-.169	-2.64***	H <sub>3aii</sub> : yes
MBG × SE → regret			-.110	-1.62*			-.109	-1.59*	H <sub>3bi</sub> : yes
MBG × SE → liking			-.057	-.803			-.050	-.737	H <sub>3bii</sub> : no
MBG × SE → WTP	-.083	-1.29*			.057	1.28*	.039	.545	
MBG × SE → PI	-.141	-2.78***			.028	.576	.028	.545	
Performance risk → WTP					-.146	-1.88**	-.137	-1.60*	
Financial risk → WTP					-.138	-1.42*	-.135	-1.84**	
Regret → WTP					.126	1.66**	.110	1.55*	
Liking → WTP					.185	1.97**	.178	2.14**	
Performance risk → PI					-.160	-2.41***	-.180	-2.74***	
Financial risk → PI					-.116	-2.35**	-.118	-2.74***	
Regret → PI					-.012	-.225	-.027	-.502	
Liking → PI					.550	8.88***	.584	11.43***	
Indirect effects			Coefficient		Z-score				Hypothesis supported
MBG → performance risk → WTP			.023		1.29*				H <sub>1ai</sub> : yes
MBG → financial risk → WTP			.014		1.06				H <sub>1aii</sub> : no
MBG → regret → WTP			-.013		-1.07				H <sub>1bi</sub> : no
MBG → liking → WTP			.040		1.74**				H <sub>1bii</sub> : yes
MBG → WTP			.064		2.64***				
MBG → performance risk → PI			.030		1.68**				H <sub>2ai</sub> : yes
MBG → financial risk → PI			.012		1.28*				H <sub>2aii</sub> : yes
MBG → regret → PI			.003		.347				H <sub>2bi</sub> : no
MBG → liking → PI			.131		3.28**				H <sub>2bii</sub> : yes
MBG → PI			.176		3.53***				
MBG × SE → WTP			.035		1.47*				H <sub>3c</sub> : yes
MBG × SE → PI			.030		1.69**				H <sub>3d</sub> : yes

<sup>a</sup> Predictor relates to ultimate endogenous variable.  
<sup>b</sup> Predictor relates to mediators.  
<sup>c</sup> Mediators relate to endogenous variables controlling for predictor variable.  
<sup>d</sup> Direct path become insignificant in the presence of the mediators.  
\*  $p < .1$  (one-tailed).  
\*\*  $p < .05$  (one-tailed).  
\*\*\*  $p < .01$  (one-tailed).

Discussion of Study 1

The goal of Study 1 was to shed light on basic consumer reactions to MBG offers. Our model of the effects of MBGs on consumer evaluations is largely supported: MBGs not only create cognitive effects by reducing consumers’ risk perceptions but also evoke positive and reduce negative emotions. Consumers’ WTP and purchase intentions are positively affected by liking but not influenced by regret (as we discuss in more detail in sections “General discussion” and “Limitations and further research”). Our results hold for both experience and search goods, though the effect is even stronger for experience goods. Accordingly, our study makes three important contributions. First, we show that responses to MBGs can be emotional. Second, these emotions provide an important explanation for

the surprising effectiveness of MBGs in influencing consumer behavior toward search goods. Third, we find a positive effect of MBGs on WTP and purchase intentions; this critical result shows that MBGs may increase revenues by both increasing the number of units sold (as indicated by purchase intentions) and enhancing the prices a seller may demand (as indicated by consumers’ WTP).

Study 2: Impact of money-back guarantee design

Impact on money-back guarantee credibility

In marketing practice, there is great variability in MBG designs because of the specification of different MBG terms (Posselt, Gerstner, & Radic 2008). Some retailers specify no

or only a few restrictions on product returns. For example, JCPenney offers a “no questions asked” 400-day MBG on its digital camera batteries (Camera Batteries 2010). In contrast, Blinds.com establishes several return conditions that customers must fulfill to get money back after returning an item (e.g., ask for authorization) (Blinds 2010). The reasons for imposing return restrictions are twofold. First, restrictions may increase consumer effort and therefore help reduce product returns by dissatisfied customers (Davis, Hagerty, & Gerstner 1998). Second, increasing consumer effort restrictions may reduce unethical returns or consumer cheating (Wirtz & Kum 2004). In both cases, the seller incurs return costs. Therefore, many retailers specify restrictive MBG terms that limit the duration and/or impose strict return conditions (Heiman et al. 2001).

However, both a short duration and strict return conditions might also prompt negative consumer evaluations. This concern is supported by prior research which has shown that a negatively framed semantic structure (i.e., verbal specifications) of a promotion negatively affects consumer behavior (Berkowitz & Walton 1980). Moorthy and Srinivasan (1995) state that MBG effects depend on the probability of truth telling, which is consistent with effects suggested for low price guarantees (e.g., Kukar-Kinney, Xia, et al. 2007; Srivastava & Lurie 2004). Therefore, MBG credibility should be a key construct that mediates the effects of different MBG designs on consumer behavior. Specifically, a short duration and more strict return conditions could evoke counterarguments from the consumer and therefore may result in lower ad credibility (Swinyard 1981). According to the persuasion knowledge model (Friestad & Wright 1994), consumers know that sellers attempt to persuade them and therefore infer different motives, depending on the specific nature of the attempt (Jain & Posavac 2001). Consumers may be skeptical of an offer and consider ulterior seller motives (Campbell & Kirmani 2000) which prevents the ad from transmitting the intended message or even could evoke negative consumer responses. In the context of a restrictive MBG, consumers may question why the seller offers an MBG but sets high hurdles to the return. In this case, they might counterargue that the retailer fails to live up to its promises because the restrictions protect it from expensive product returns. Therefore consumers do not consider the self-imposed penalty of promising money back a credible signal by the seller (Boulding & Kirmani 1993). We hypothesize:

**H<sub>4a</sub>.** A short duration of an MBG decreases MBG credibility.

**H<sub>4b</sub>.** Strict return conditions stated in an MBG decrease MBG credibility.

Furthermore, the return conditions should have a stronger effect on MBG credibility than its duration. First, inferring negative seller motives should occur to a stronger degree in the case of strict return conditions because the consumer effort to return the product increases which should evoke strong counterarguments from the consumer and therefore makes the guarantee signal less credible. Second, Ford, Smith, and Swasy (1990) postulate that consumers are less skeptical of objective claims than subjective claims. The MBG duration is objective information because the

period is specific and not subject to interpretation. In contrast, MBG return conditions tend to be outlined in multiple written paragraphs, demand interpretation, and leave room for unexpected seller reactions (i.e., the consumer might fear the seller will deny a product return because she or he did not conform with one of the many conditions), which makes them subjective information. According to Ford et al. (1990), consumers thus should be more skeptical when faced with strict return conditions than when faced with a short MBG duration. We propose:

**H<sub>4c</sub>.** MBG return conditions exert a stronger influence on MBG credibility than does MBG duration.

#### *Moderating effects of type of product*

Because experience goods can be evaluated only after consumption, consumers are often skeptical of their advertising claims (Franke, Huhmann, & Mothersbaugh 2004). In contrast, for search goods, consumers might reason that “this must be true as I can verify it without much ado” (Jain & Posavac 2001, p. 170) and therefore should be less skeptical. Thus credibility concerns should be greater for experience goods (Franke et al. 2004) and a seller needs to send strong signals to reduce information asymmetry; otherwise, credibility problems arise. Consumers should not view MBGs that provide only short durations and/or strict return conditions as strong signals because these guarantee restrictions evoke counter argumentation and inferences of negative seller motives (Kukar-Kinney, Xia, et al. 2007). When consumers attribute negative motives to the seller, the credibility of the guarantee decreases. Considering the higher degree of consumer skepticism for claims that advertise experience goods, we suggest that the negative impact of a short duration and strict return conditions on MBG credibility will be more pronounced for experience goods. That is:

**H<sub>5a</sub>.** A short duration of an MBG reduces MBG credibility to a higher degree for experience goods than for search goods.

**H<sub>5b</sub>.** Strict return conditions stated in an MBG reduce MBG credibility to a higher degree for experience goods than for search goods.

#### *Effects of money-back guarantee credibility*

Consumers evaluate a product more favorably when the credibility of its advertised claims is higher (Jain & Posavac 2001; Kukar-Kinney & Walters 2003). In contrast, they counterargue and discount a claim with low credibility which results in its lower acceptance (Swinyard 1981). Thus, an MBG will not be accepted if it is not credible. As we demonstrated with regard to H<sub>1</sub> and H<sub>2</sub>, an MBG that is accepted reduces risk perceptions, enhances emotional responses, and increases a consumer’s WTP and purchase intention. To achieve positive effects on consumer risk and emotions and thus on WTP and purchase intentions, an MBG thus needs to be credible. We propose the following indirect effects of MBG credibility on the dependent variables:

**H<sub>6a</sub>.** By reducing (i) performance risk and (ii) financial risk, MBG credibility increases consumers’ WTP.

**H<sub>6b</sub>.** By reducing (i) anticipated regret and increasing (ii) liking, MBG credibility increases consumers' WTP.

**H<sub>6c</sub>.** By reducing (i) performance risk and (ii) financial risk, MBG credibility increases consumers' purchase intentions.

**H<sub>6d</sub>.** By reducing (i) anticipated regret and increasing (ii) liking, MBG credibility increases consumers' purchase intentions.

### Method

*Sample and experimental design.* Similar to Study 1, we used a consumer panel which is representative of the German market. To test H<sub>4</sub>–H<sub>6</sub>, we applied a 2 (less strict vs. strict MBG return conditions) × 2 (long vs. short MBG duration) × 2 (search vs. experience good) between-subjects experimental design. Thus, Study 2 contained eight experimental conditions in which 400 people participated. We employed the same products as in Study 1. However, the results of the search and experience qualities check indicated no need to exclude products from the final sample (see Table 1).

The MBG return conditions were manipulated with statements that indicated a product return would need to be justified by at least 20 written words (strict conditions) or that no questions would be asked (less strict conditions). Duration was manipulated by indicating that a product could be returned within 30 days (long duration) or five days (short duration). We chose these manipulations as representative of those frequently used in marketing practice. The setting was the same as that for Study 1, except that all respondents of Study 2 read a scenario that included information about an MBG offer. We again controlled for the advertisement's information content and respondents' prior knowledge in the product category.

*Measures and manipulation checks.* The dependent variables of Study 2 were the same as in Study 1, except for MBG credibility. We measured MBG credibility using two items based on Kukar-Kinney and Walters's (2003) scale. Again, the values for the reliability and validity measures were adequate for all constructs (see Table 2), and we did not detect any serious problems of discriminant validity or common method variance ( $\chi^2 = 179.23$ ,  $df = 131$ , CFI = .99; RMSEA = .03; SRMR = .019). We measured the manipulation checks on a seven-point Likert scale (the scale of return conditions ranged from 1 = "not strict at all" to 7 = "very strict"; the scale of duration ranged from 1 = "very long" to 7 = "very short"; see Appendix A) and obtained evidence of successful manipulations ( $M_{\text{less strict}} = 3.02$ ,  $M_{\text{strict}} = 5.75$ ;  $p < .01$ ;  $M_{\text{long}} = 4.00$ ,  $M_{\text{short}} = 4.88$ ;  $p < .01$ ). We also performed a 2 × 2 analysis of variance (ANOVA) of the statistical significance of all main and interaction effects (for a detailed description, see Perdue & Summers 1986). Only significant effects for the main effects of the manipulations in their corresponding manipulation checks were in evidence.

*Procedure.* Before answering the questionnaire, participants provided their demographic information. They were then exposed to the treatment conditions, rated the dependent variables, completed the manipulation checks, and responded to controls.

### Results

Similar to Study 1, we employed MPLUS 5.2 to calculate the model results (see Table 5). We obtained good results for the model's overall fit ( $\chi^2 = 662.15$ ,  $df = 288$ ; CFI = .96; RMSEA = .057; SRMR = .09). We then tested for the three-way interaction of return conditions, duration, and type of product on MBG credibility, which was not significant ( $\beta = -.086$ ,  $t = -.234$ ). Thus, the effects suggested in the hypotheses can be interpreted. H<sub>4a</sub> and H<sub>4b</sub> predict that a short MBG duration and strict MBG return conditions reduce MBG credibility. The path from MBG duration to MBG credibility is significant ( $\beta = -.084$ ,  $t = -1.64$ ), in support of H<sub>4a</sub>. Moreover, our results confirm H<sub>4b</sub> by showing that strict conditions negatively influence MBG credibility ( $\beta = -.554$ ,  $t = -12.83$ ). Considering the relative effectiveness of the MBG design elements, path coefficients show that the effect of duration on credibility is lower than the one of return conditions, which supports H<sub>4c</sub>. We also conducted a chi-square difference test in which we held the two paths to be equal. This assumption yielded a significantly worse model fit ( $\Delta\chi^2 = 23.22$ ;  $\Delta df = 1$ ), in further support of H<sub>4c</sub>.

H<sub>5</sub> refers to the interaction of the two MBG design elements separately with the type of product. The results reveal a significant interaction effect between test duration and type of product on MBG credibility ( $\beta = -.170$ ,  $t = -1.31$ ). That is, the negative effect of a short duration on MBG credibility is significantly stronger for experience goods. However, the interaction between the type of product and return conditions is significant with a positive coefficient ( $\beta = .445$ ,  $t = 4.08$ ), meaning that strict return conditions lead to higher credibility perceptions in the case of experience goods relative to search goods. Thus our results contradict the effect we propose in H<sub>5b</sub>, while H<sub>5a</sub> is supported.

Finally, we analyzed the behavioral outcomes of MBG credibility using a bootstrapping technique to calculate the significance of the indirect effects. First, as we expected, greater MBG credibility reduces performance risk ( $\beta = -.523$ ,  $t = -13.38$ ), financial risk ( $\beta = -.277$ ,  $t = -5.65$ ), and anticipated regret ( $\beta = -.377$ ,  $t = -8.32$ ) and increases liking ( $\beta = .494$ ,  $t = 12.78$ ) to a significant degree. Second, we find significant indirect effects of MBG credibility on both WTP (.216;  $Z = 5.63$ ) and purchase intentions (.457;  $Z = 9.78$ ). Specifically, performance (.146;  $Z = 4.27$ ) and financial risk perceptions (.021;  $Z = 1.45$ ), regret (.070;  $Z = 2.21$ ), and liking (.219;  $Z = 4.96$ ) all mediate the effect on purchase intentions, whereas only performance risk (.073;  $Z = 2.13$ ) and liking (.136;  $Z = 3.95$ ) mediate the effect on WTP. Thus, with the exception of H<sub>6aii</sub> and H<sub>6bi</sub>, H<sub>6a</sub> to H<sub>6d</sub> are supported. In terms of the relative strength of the MBG effect on the two intentional variables results show its higher importance in increasing consumers' purchase intentions compared to their WTP. As in Study 1, the positive emotion of liking plays a central role in addressing WTP and purchase intentions.

Finally, though not hypothesized, retailers are also interested in learning more about the effects of the MBG design elements on WTP and purchase intentions. Therefore we calculated the total effects of the design elements. The values in Table 5 reveal

Table 5  
Results of Study 2.

Path	Coefficient <sup>a</sup>		T-value <sup>a</sup>		Hypothesis supported			
Effects of MBG design elements								
Test duration (TD) → WTP	-.154		-2.62**					
TD → PI	-.068		-1.19					
TD → MBG credibility	-.084		-1.64**		H4a: yes			
Return conditions (RC) → WTP	-.144		-2.58***					
RC → PI	-.249		-4.69***					
RC → MBG credibility	-.554		-12.8***		H4b: yes			
TD × SE → WTP	.135		.899					
TD × SE → PI	.125		.859					
TD × SE → MBG credibility	-.170		-1.31*		H5a: yes			
RC × SE → WTP	-.060		-.472					
RC × SE → PI	-.015		-.118					
RC × SE → MBG credibility	.445		4.08***		H5b: no			
	Model 1 <sup>b</sup>		Model 2 <sup>c</sup>		Model 3 <sup>d</sup>		Model 4 <sup>e</sup>	
Path	Coefficient	T-value	Coefficient	T-value	Coefficient	T-value	Coefficient	T-value
Results of mediator analysis: MBG credibility								
MBG credibility → performance risk			-.428	-11.0***			-.523	-13.3***
MBG credibility → financial risk			-.242	-5.25***			-.277	-5.65***
MBG credibility → regret			-.367	-7.48***			-.377	-8.32***
MBG credibility → liking			.421	10.59***			.494	12.78***
MBG credibility → WTP	.376	8.25***			.137	2.42**	.136	2.31***
MBG credibility → PI	.468	11.5***			.032	.743	.021	.448
Performance risk → WTP					-.135	-2.04**	-.139	-2.14**
Financial risk → WTP					.014	.232	.015	.252
Regret → WTP					-.029	-.458	-.030	-.499
Liking → WTP					.270	4.15***	.276	4.36***
Performance risk → PI					-.258	-5.15***	-.280	-5.31***
Financial risk → PI					-.073	-1.56*	-.076	-1.63*
Regret → PI					-.167	-3.42***	-.187	-3.79***
Liking → PI					.407	8.31***	.443	8.81***
Indirect effects								
	Coefficient			Z-score		Hypothesis supported		
MBG credibility → perf. risk → WTP	.073			2.13**		H6ai: yes		
MBG credibility → fin. risk → WTP	-.004			-.251		H6aii: no		
MBG credibility → regret → WTP	.011			.472		H6bi: no		
MBG credibility → liking → WTP	.136			3.95**		H6bii: yes		
MBG credibility → WTP	.216			5.63***				
MBG credibility → perf. risk → PI	.147			4.27***		H6ci: yes		
MBG credibility → fin. risk → PI	.021			1.45*		H6cii: yes		
MBG credibility → regret → PI	.070			2.21**		H6di: yes		
MBG credibility → liking → PI	.219			4.96***		H6dii: yes		
MBG credibility → PI	.457			9.78***				

<sup>a</sup> Model with design elements as predictors of WTP, PI, and credibility.  
<sup>b</sup> Predictor relates to ultimate endogenous variable.  
<sup>c</sup> Predictor relates to mediators.  
<sup>d</sup> Mediators relate to endogenous variables controlling for predictor variable.  
<sup>e</sup> Direct path become insignificant in the presence of the mediators.  
\*  $p < .1$  (one-tailed).  
\*\*  $p < .05$  (one-tailed).  
\*\*\*  $p < .01$  (one-tailed).

a significant negative effect of both a short duration and strict return conditions on WTP. In addition, strict return conditions have a negative effect on purchase intentions.

**General discussion**

We have attempted to analyze the behavioral outcomes of MBGs for different product categories and to identify

effective guarantee designs. In two studies, we examined the effects of an MBG and its terms on consumer evaluations and behavior in the context of eight search and experience goods. Moreover, we extend the literature on MBGs by examining both cognitive and affective elements and their impact on WTP and purchase intentions. Thus the two studies contribute to retailing literature in several important ways.

First, to the best of our knowledge, we are the first to show that MBGs stimulate emotional responses in addition to cognitive ones. Second, in both studies, we find that MBGs positively affect consumers' WTP and purchase intentions. Thus, MBGs may increase sales and profits and can be used to gain a competitive edge. Third, we investigate the effects of variations in MBG designs and reveal that two widely used design elements, duration and return conditions, have important impacts on consumer decision making. Fourth, empirical research has not investigated the type of product for which MBGs will be most effective, but we show with our representative data that they work well when added to a search good, which constitutes a surprising effect, considering that search goods can be effectively evaluated before purchase.

### *Theoretical contributions*

In contrast with previous research, which has mostly adopted an information economics approach focusing on the cognitive outcomes of a guarantee (i.e., signaling product quality or reducing consumers' risk perceptions), we extend knowledge in this area by examining a largely ignored aspect, consumer emotions. By finding affective outcomes of MBGs, our results nicely extend studies that show a positive impact on emotions for other promotional tools such as free gifts and coupons (Chandon et al. 2000; Lichtenstein, Netemeyer, & Burton 1990). Though our investigation is restricted to the two emotions of anticipated regret and liking we also respond to Puccinelli et al. (2009) by detecting an additional retailer cue for positively influencing consumer emotions (i.e., an MBG reduces anticipated regret and increases liking). Furthermore, in both studies, we show that liking caused by an MBG strongly affects consumer behavior by increasing consumers' WTP and purchase intentions. Surprisingly, the path coefficients also reveal that liking has a stronger effect on important MBG outcomes than do risk perceptions, an effect that cannot be detected if MBGs are regarded solely as risk reducers. This finding confirms the important role of emotions in consumer behavior, as frequently stated by researchers (e.g., Darke, Chattopadhyay, & Ashworth 2006; Pham 1998, 2004).

Even more supporting the latter conclusion, it is interesting that consumer responses are positively affected when an MBG is provided for search goods, and emotions strongly explain the surprising effectiveness of an MBG in a search goods context. Therefore, as expected for experience goods, our data also justify the frequent use of MBGs to advertise search goods and highlight the strong impact of MBGs on consumer evaluations for various product types.

Anticipated regret had weaker or even no effects on the dependent variables. The literature distinguishes between spontaneous/hedonic and more cognitive emotions, with their different effects on consumer behavior (e.g., Ramanathan & Williams 2007). According to Brown, Homer, and Inman (1998) and Schwarz and Clore (1996), emotions that require a high degree of cognitive elaboration have less impact on consumer behavior. Liking is highly spontaneous and hedonic, but we categorize anticipated regret as a more cognitive emotion, because for it to occur, a consumer must (cognitively) imagine future

negative purchase outcomes. Simonson (1992) shows that anticipated regret is important for consumer behavior, but it likely affects consumer behavior when the mental imagery of negative purchase consequences gets *enforced* by the advertiser—which our experimental design did not do. Simonson (1992) accounts for the manipulation of mental imagery about negative consequences, as we discuss in section “Limitations and further research”.

With regard to the profit impact of MBGs, we confirm an indirect link to WTP. Prior literature has noted this relationship conceptually (Fruchter & Gerstner 1999); we empirically demonstrate the effect as mediated by consumers' risk perceptions and emotional responses. As explained by equity theory, consumers are willing to “pay” the provider of an MBG to reduce their costs by eliminating the negative consequences associated with the purchase and providing emotional benefits. Therefore, we also respond to Chaudhuri and Ligas's (2009) call by providing another idea about how to influence consumers' WTP.

As consistently demonstrated in Study 1 and 2, performance risk and liking both affect consumers' WTP; anticipated regret and financial risk do not. Regarding the emotional antecedents of WTP, we return to our preceding explanation: Liking as a strong spontaneous and hedonic emotion has a stronger impact on consumer behavior than does the more cognitive emotion of anticipated regret. Financial risk pertains to two aspects in an MBG context: First, an assurance against overpaying, because an item can be returned after purchase if the consumer finds a lower price for the same item at another store. However, a consumer should not be willing to pay more for this assurance to not overpay because the purchase would then no longer offer the value of a lower price. Second, an MBG provides assurance about the costs associated with product breakdown. However, product breakdown is not likely to occur during the guarantee duration, and these future costs often get strongly discounted, so they may have no prepurchase effects. In contrast, performance risk is closely related to quality perceptions which strongly affect WTP (Steenkamp, Van Veen, & Geyskens 2010). We therefore suggest that WTP might be more affected by promotion-focused goals which deal with obtaining positive outcomes (e.g., “what quality will I get?”/“how well will the product perform?”) rather than prevention-focused goals which deal with avoiding negative outcomes (e.g., “how much (financial) risk is involved?”/“will I feel regret after purchase?”) (e.g., Wang & Lee 2006; Zhu & Meyers-Levy 2007).

We also address a previously unanswered question about what constitutes an effective MBG design in terms of duration and return conditions. To reduce customer cheating, some researchers have proposed higher hurdles (e.g., Chu et al. 1998), though empirical studies offer no evidence of such unintended outcomes (Wirtz & Kum 2004). Sellers frequently impose return restrictions, but our results suggest that a short duration and/or strict return conditions can be detrimental because they reduce MBG credibility and, in turn, negatively affect cognitions, affect, and intentions. Therefore, sellers should design less restrictive MBGs to positively affect consumer behavior.

In contrast, for experience goods, stricter MBG return conditions lead to significantly higher credibility perceptions

compared to search goods. This unexpected finding can be explained by the evidence argument from service literature. Sometimes consumers do not know why, where, when, and how to participate in a specific process. That is, they might have only limited process evidence that consists of process awareness and process transparency (Fliess & Kleinaltenkamp 2004). Providing detailed information about their responsibilities for acting on an MBG thus might increase their confidence about the return procedure. This argument is in line with Cheema and Patrick (2008), who state that restrictive designs of promotions may be preferred to expansive ones because they are more precise and therefore less ambiguous. Providing precise information should be more important for experience goods when the consumer is uncertain about purchase outcomes.

### *Managerial contributions*

Our results have several important managerial implications. MBGs reduce consumer's risk perceptions, increase their emotional response, and enhance their WTP and purchase intentions, indicating that retailers may sell more units and demand higher prices when offering MBGs. These results hold for various types of goods, including search goods, which justifies the broad use of MBGs in retailing and marketing practice and should even stimulate further implementations. However, as financial risk and anticipated regret are more strongly reduced and WTP and purchase intentions are more strongly increased for experience goods, retailers whose assortment consists of a large proportion of experience goods may have an even greater incentive to offer MBGs compared to retailers selling mainly search goods.

Moreover, MBG effects strongly depend on the specified terms. When designing an MBG, managers should carefully craft those terms to avoid negative effects on their credibility, which would result in greater risk perceptions and negative emotional responses and thus affect behavioral outcomes. The interaction of the design elements and type of product is important, that is, effective MBG designs depend on the type of product. Study 2 shows that strict return conditions result in higher credibility perceptions for experience goods relative to search goods. We argue this effect might reflect the greater information stated in restrictive MBGs, which make the guarantee less ambiguous (Cheema & Patrick 2008). Therefore, in the case of experience goods retailers should inform consumers how to invoke a guarantee. Specifying the return conditions may accomplish this goal and at the same time, decrease unintended effects of an MBG in the form of customer cheating, in that the return conditions provide factual and psychological return hurdles. This specific result concerning the design of MBGs for experience goods is interesting because conceptual research on service recovery highlights that guarantee designs which are easy to invoke are the most credible (Hart 1993; Hogreve & Gremler 2009). Therefore, when stressing the informational content of an MBG by implementing stricter return conditions, retailers must be aware of possible negative reactions. They might draw specific attention to the perceived fairness of the guarantee offer as studies have found that the fairness of the recovery procedure is important (Gelbrich & Roschk 2011; Tax,

Brown, & Chandrashekar 1998). Accounting for perceived procedural fairness when crafting the return conditions of an MBG, retailers will be able to offer more effective guarantees.

With regard to duration, we find a negative effect of a short duration on MBG credibility for search and experience goods. Consumers perceive an MBG as adequate if it provides sufficient time to evaluate the item; otherwise, credibility problems arise. Thus, retailers should provide long MBG durations if they want to influence purchase behavior positively. Comparing both design elements the results unveil a significantly greater importance of the return conditions for consumer decision making compared to the duration.

Therefore, with these results obtained from our representative studies, managers should better understand the consumer impact of MBGs and can make better decisions about how to design MBGs according to the level of product risk involved and how to price guaranteed items.

### **Limitations and further research**

This study has several limitations that provide directions for further research. First, to keep our model parsimonious, we focused on two cognitive constructs (performance and financial risk) and two affective constructs (regret and liking). However, we did not examine other important variables, such as quality perceptions. Information economics regards the increase of quality perceptions as a main effect of the guarantee signal (Spence 1974), though d'Astous and Guèvremont (2008) do not find support for this relationship in their empirical study. Thus, further research needs to investigate the conditions in which an MBG serves as a signal of high quality.

Second, our study provides only a first glimpse into the emotional outcomes of MBGs as we only examine two of a number of possible emotions. However, considering that we find strong results for the positive emotion that we did study, further research should identify other positive emotions that mediate consumer responses to an MBG, such as emotions related to value expression (e.g., smart shopper feeling), exploration (e.g., arousal, variety), or entertainment (e.g., amusement, aesthetic value).

Third, we note some limitations in our experimental design. First, we did not measure actual purchase behavior, so we are somewhat limited in our conclusions regarding the profit impact of MBGs. The problem of measuring evaluations and intentions toward a fictive scenario also might have contributed to the weak effects of anticipated regret on WTP and purchase intentions. Investigating the impact of MBGs in real shopping situations, in which subjects must buy an item and incentives encourage their real behavior, might reduce this problem. The second issue regarding our experimental design might further explain the low impact of regret on consumer intentions. In contrast with our approach, Simonson (1992) manipulates mental imagery of the negative consequences of a choice by telling only one group of subjects that the superiority or inferiority of their choice, compared with unchosen alternatives, would be revealed after their choice decision. The participants in the different enforcement of anticipated regret groups made different choice decisions, which indicate the relevance of anticipated regret in choice tasks.

Third, our experimental design incorporated two products (ski boots and anti-dandruff shampoo) that might be of less relevance to some consumers. Although product involvement did not differ across the search and experience goods categories, future research might investigate other products that are more homogeneous regarding this issue. Fourth, different MBG manipulations might provide unique results. Additional research should investigate whether different manipulations regarding MBG durations or return conditions prove the robustness of our results. Other MBG characteristics could be investigated as well. For example, some retailers do not refund the full purchase price but rather offer store credit (d'Astous and Guèvremont 2008). The impact of these different compensation schemes on consumers would be an interesting topic to study. The final issue regarding our experimental design refers to the MBG presentation in the experimental advertisements. For example, future research could study whether additional MBG information (e.g., MBG logo provided or not) changes the empirical results.

Fourth, our model does not examine the possible unintended outcomes of MBGs. Some researchers have suggested that lenient product return policies lead to abuses (e.g., McWilliams & Gerstner 2006; Petersen & Kumar 2009). Harris (2008) finds evidence of opportunistic consumer behavior in the form of “retail borrowing.” Further research should determine whether the presence of an MBG stimulates unethical behavior. It would be particularly useful to discover which MBG terms facilitate this behavior or how it might be repressed by the use of different MBG design elements. For example, Chu et al. (1998) argue theoretically that partial refunds may help reduce consumer opportunism. Empirical evidence for this notion is still lacking.

## Appendix A. Manipulation checks and controls

### Experience Qualities (Weathers et al. 2007)

1. It's important for me to *see* this product to evaluate how well it will perform. (“totally disagree/totally agree”)
2. It's important for me to *touch* this product to evaluate how well it will perform. (“totally disagree/totally agree”)
3. It's important for me to *test* this product to evaluate how well it will perform. (“totally disagree/totally agree”)

### Search Qualities (Weathers et al. 2007)

1. I can adequately evaluate this product using only information about the product's attributes and features provided by the retailer or the manufacturer. (“totally disagree/totally agree”)
2. I can evaluate the quality of this product simply by reading information about the product. (“totally disagree/totally agree”)

### MBG Presence (MBG manipulation check in Study 1)

1. Did the advertiser use an MBG? (“yes/no”)

MBG Return Conditions (first of two MBG manipulation checks in Study 2)

1. I perceived return conditions stated in the money-back guarantee to be (“not strict at all/very strict”).

MBG Test Duration (second of two MBG manipulation checks in Study 2)

1. I perceived the duration stated in the money-back guarantee to be (“very long/very short”).

Inherent Product Risk (own items)

1. Buying this type of product involves high risk. (“totally disagree/totally agree”)
2. Buying this type of product leaves me with high outcome uncertainties. (“totally disagree/totally agree”)

Hedonic Versus Utilitarian Product Category Perceptions (Chen, Kalra, & Sun 2009)

1. This product category is (“not at all hedonic/extremely hedonic”).
2. This product category is (“not at all utilitarian/extremely utilitarian”).

Product Category Involvement (Flynn, Goldsmith, & Eastman 1996)

1. In general I have a strong interest in this product category. (“totally disagree/totally agree”)
2. This product category is very important to me. (“totally disagree/totally agree”)
3. This product category matters a lot to me. (“totally disagree/totally agree”)

Product Knowledge (Weathers et al. 2007)

1. Compared to people surrounding me, I am very knowledgeable about this product. (“totally disagree/totally agree”)
2. Compared to friends, I have much experience with this product. (“totally disagree/totally agree”)

Perceived Information Content of the Advertisement (Kalra & Goodstein 1998)

The advertisement is (“not at all informative/very informative”).

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