CAN WE PREDICT CUSTOMER LIFETIME VALUE?

EDWARD C. MALTHOUSE AND ROBERT C. BLATTBERG

EDWARD C. MALTHOUSE
is an Associate Professor, Integrated Marketing Communications, Medill School of Journalism, Northwestern University, Evanston, IL; e-mail: ecm@northwestern.edu

ROBERT C. BLATTBERG
is Polk Bros. Distinguished Professor of Retailing, Kellogg School of Management, Northwestern University

The authors are grateful to Karsten Hansen and Kay Peters for helpful discussions, and several anonymous reviewers for helpful comments. They also thank Experian for the Z-24 data set.

Relationship marketing assumes that firms can be more profitable if they identify the most profitable customers and invest disproportionate marketing resources in them. While intuitive, such strategies presume that a firm can accurately predict the *future* profitability of customers. In particular, we argue that the feasibility of such strategies depends on the *probabilities* and *costs* of misclassifying customers. This paper presents a detailed empirical evaluation of how accurately the future profitability of customers can be estimated. We evaluate a firm's ability to estimate the future value of customers using four data sets from different industries. Out-of-sample estimates of predictive accuracy are provided. We examine (1) the accuracy of predictions, (2) how accuracy depends on the length of time over which estimates are made, and (3) the predictors of the firm's best customers. We propose the 20–55 and 80–15 rules. Of the top 20%, approximately 55% will be misclassified (and not receive special treatment). Of the future bottom 80%, approximately 15% will be misclassified (and receive special treatment). Thus, a firm cannot assume that high-profit customers in the past will be profitable in the future nor can they assume that historically low-profit will be low-profit customers in the future.

© 2005 Wiley Periodicals, Inc. and Direct Marketing Educational Foundation, Inc.

JOURNAL OF INTERACTIVE MARKETING VOLUME 19 / NUMBER 1 / WINTER 2005
Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/dir.20027

INTRODUCTION

The long-term value (CLV) of a customer "represents the present value of the expected benefits (e.g., gross margin) less the burdens (e.g., direct costs of servicing and communicating) from customers" (Dwyer, 1997, p. 7). CLV has become central to relationship marketing (e.g., Sheth, Mittal, & Newman, 1999) and customer equity approaches to marketing (e.g., Blattberg, Getz, & Thomas, 2001; Rust, Zeithaml, & Lemon, 2000). "In relationship marketing, relationships with single customers are interpreted as capital assets requiring appropriate management and investment (e.g., Hennig-Thurau & Hansen, 2000, p. 16)." Such approaches to marketing contend that a firm can ultimately be more profitable by evaluating the profitability of customers and then designing marketing programs for its best customers. Disproportionate marketing resources should be allocated to retaining best customers and keeping them loyal. This strategy would seem to make obvious sense, since it is common for a small percentage of customers to account for a large percentage of revenues and profits (Mulhern, 1999).

Using CLV or predictors of CLV (e.g., historical purchasing behavior) to allocate marketing resources assumes that the *future* value of a customer can be estimated accurately. This assumption is rarely discussed and there is little empirical evidence evaluating it. The accuracy with which the future value of a customer can be predicted falls along a continuum. One extreme is where future behavior can be predicted perfectly given the customer's past behavior and the firm's marketing actions (in regression terms this would correspond to $R^2 = 1$). The other extreme is where the future behavior of customers is independent of their past behavior and the firm's marketing actions (in regression this would correspond to $R^2 = 0$). As Mulhern (1999, p. 28) notes, "models incorporating predicted future purchases are subject to a great deal of forecasting error," but he does not quantify how much forecasting error.

The firm considering whether or not to practice such relationship marketing and customer equity strategies must understand where it falls along this continuum. Investing disproportionate resources in specific customers makes unquestionable sense when their future behavior can be predicted perfectly, but no sense when future behavior is unpredictable ($R^2 = 0$). In the latter case, an egalitarian strategy where all customers are treated equally or the quid-pro-quo incentives discussed below should be used.

Suppose a firm offers two levels of treatment: "best-customer" treatment and "normal" treatment. Assuming the firm cannot predict the future behavior of customers perfectly, the firm can misclassify customers in two possible ways. It could misclassify a future normal customer as a future best customer—a false positive using the language of hypothesis testing—or misclassify a future best customer as future normal customer—a false negative. There are costs associated with both types of misclassifications. When a firm makes a false positive misclassification it is spending scarce marketing resources to deliver best-customer treatment to a future "normal" customer whose behavior does not justify such treatment. It is more difficult to quantify the costs of a false negative. The customer who deserves best-customer treatment but receives normal treatment could switch part or all of its future expenditures to a competitor, spread negative word of mouth, etc. Whether or not a firm should make disproportionate marketing investments across customers depends on the probabilities and costs of misclassifying customers. The costs of misclassification have not be quantified in either the literature or by business practitioners, to our knowledge.

Some examples illustrate our point. An executive who has been using a credit card to spend a large amount of money on expensive clothing, airline tickets, car rentals, hotel rooms, cellular phone service, etc. may retire and spend far less in these categories. This executive goes from being a "best customer" of the companies that provide these products or services to a non-best customer. Showering this executive with discretionary marketing investments after retirement may not be an optimal strategy. This is an example of a false positive. Alternatively, someone who is not so valuable today can, for example, take a new job and become a star customer tomorrow—a false negative.

In using historical information to allocate marketing investments a firm may be relying on chance purchases. There will always be a certain level of randomness in a customer's purchases. Are the customers who receive special treatment really better customers? Or, are they customers who just happened to be "better" during some recent period and will "regress" back to

دریافت فوری ← **متن کامل مقاله**

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات