



Reports

Myopic Marketing Management: The Phenomenon and Its Long-term Impact on Firm Value (06-100)

Natalie Mizik and Robert Jacobson

Brand Portfolio Strategy and Firm Performance (06-101)

Neil A. Morgan and Lopo Leotte do Rego

Integrated Marketing Communications at the Marketing-Sales Interface (06-102)

Timothy M. Smith, Srinath Gopalakrishna, and Rabikar Chatterjee

Effects of Capacity-Driven Service Experiences on Customer Usage Levels: Why Revenue Management Systems Are Due for Change (06-103)

Florian v. Wangenheim and Tomás Bayón

Market Orientation and Performance at the “Base of the Pyramid”: The Case of Zimbabwean Retailers (06-104)

Steven Michael Burgess and Pfavai Nyajeka

Developing Optimal Store-level Pricing Strategies for an Automotive Aftermarket Retailer (06-105)

Murali K. Mantrala, P. B. (Seethu) Seetharaman, Rajeeve Kaul, Srinath Gopalakrishna, and Antonie Stam

The Short- and Long-term Impact of an Assortment Reduction on Category Sales (06-106)

Laurens M. Slood, Dennis Fok, and Peter C. Verhoef

2 0 0 6

W O R K I N G
P A P E R
S E R I E S

I S S U E O N E

N O . 0 6 - 0 0 1

MSI

Reports

Executive Director

Dominique Hanssens

Research Director

Ross Rizley

Editorial Director

Susan Keane

Publication Design

Laughlin/Winkler, Inc.

The Marketing Science Institute supports academic research for the development—and practical translation—of leading-edge marketing knowledge on issues of importance to business performance. Topics are identified by the Board of Trustees, which represents MSI member corporations and the academic community. MSI supports academic studies on these issues and disseminates findings through conferences and workshops, as well as through its publications series.

Marketing Science Institute
1000 Massachusetts Avenue
Cambridge, MA
02138-5396

Phone: 617.491.2060
Fax: 617.491.2065
www.msi.org

MSI Reports (ISSN 1545-5041) is published quarterly by the Marketing Science Institute. It is not to be reproduced or published, in any form or by any means, electronic or mechanical, without written permission.

The views expressed here are those of the authors.

MSI Reports © 2006
Marketing Science Institute
All rights reserved.

Working Paper Series

The articles that appear in *MSI Reports* have not undergone a formal academic review. They are released as part of the MSI Working Paper Series, and are distributed for the benefit of MSI corporate and academic members and the general public.

Subscriptions

Annual subscriptions to *MSI Reports* can be placed online at www.msi.org. Questions regarding subscriptions may be directed to pubs@msi.org.

Single reports

Articles in *MSI Reports* are available in downloadable (PDF) format at www.msi.org.

Past reports

MSI working papers published before 2003 are available as individual hard-copy reports; many are also available in downloadable (PDF) format. To order, go to www.msi.org.

Corporate members

MSI member company personnel receive all MSI reports (PDF and print versions) free of charge.

Academic members

Academics may qualify for free access to PDF (downloadable) versions of MSI reports and for special rates on other MSI print publications. For more information and to apply, go to "Academic and Quantity Discounts" in the Publications section of www.msi.org.

Classroom use

Upon written request, MSI working papers may be copied for one-time classroom use free of charge. Please contact MSI to obtain permission.

Search for publications

See the searchable publications database at www.msi.org.

Submissions

MSI will consider a paper for inclusion in *MSI Reports*, even if the research was not originally supported by MSI, if the paper deals with a priority subject, represents a significant advance over existing literature, and has not been widely disseminated elsewhere. Only submissions from faculty members or doctoral students working with faculty advisors will be considered. "MSI Working Paper Guidelines" and "MSI 2004-2006 Research Priorities" are available in the Research section of www.msi.org.

Publication announcements

To sign up to receive MSI's electronic newsletter, go to www.msi.org.

Change of address

Send old and new address to pubs@msi.org.

2 0 0 6

W O R K I N G
P A P E R
S E R I E S

I S S U E O N E

N O . 0 6 - 0 0 1

Myopic Marketing Management: The Phenomenon and Its Long-term Impact on Firm Value

By Natalie Mizik and Robert Jacobson

Managers may be tempted to reduce marketing spending to inflate current earnings. What are the future consequences of such short-term-oriented behavior? In the long run, myopic marketing management impairs the marketing function, harms intangible marketing assets such as customer and brand equity, and ultimately destroys shareholder value.

Report Summary

At times, managers face short-term incentives that lead them to engage in “myopic marketing management”: in order to artificially inflate current-term earnings (and thereby increase current stock price), they cut marketing expenditures. How prevalent is this phenomenon of myopic marketing management? What are the long-term performance implications of myopic marketing management?

Mizik and Jacobson investigate these questions in the context of seasoned equity offerings (SEOs), i.e., when a firm issues additional equity to collect additional capital. Since the amount of capital collected by the firm depends on the stock price on the day of issue, managers have an incentive to engage in earnings inflation at the time of an SEO. This incentive stems from the fact that investors rely on current-term accounting performance measures to form their expectations of the future-term performance and, as such, to value equity.

Using empirical modeling and data from Thomson Financial Securities, COMPUSTAT, and the University of Chicago’s Center for

Research in Security Prices (CRSP) databases, they find the following:

- A significant number of firms are engaging in myopic marketing management and are inflating their earnings by cutting marketing spending: at the time of an SEO, 65.0% of firms fall below their expected levels of marketing spending and 58.5% fall above their expected levels of earnings.
- Financial markets appear unable to distinguish firms that are practicing myopic marketing management at the time of an SEO from those that are not: myopic firms are overvalued at the time of an SEO, but in years subsequent to the SEO year, as the consequences of cutting marketing spending are realized in inferior financial performance, they have large negative abnormal stock returns.
- While myopic marketing management has some short-term benefits in terms of higher current-term earnings and stock price, it has a detrimental long-term impact on firm value. Myopic firms have long-term stock returns significantly lower than other firms.
- Myopic marketing management might have negative consequences not only for the firms

Natalie Mizik is Assistant Professor, Graduate School of Business, Columbia University.

Robert Jacobson is Evert McCabe Distinguished Professor of Marketing, School of Business, University of Washington.

undertaking myopic strategies, but also for the firms not doing so: non-myopic firms may be undervalued at the time of an SEO issuing and, as such, might not be able to collect a fair price for their new equity.

These results are likely to generalize to other contexts. Firms practicing myopic management forego strategies with superior future profits for those that generate immediate returns. In general, managers have incentives to behave myopically when (1) their performance evaluation depends on a current-term outcome measure or on the stock market reaction and (2) they can engage in an inter-temporal shifting of expenditures that cannot be fully discerned by the evaluator. The authors argue that myopic marketing management impairs marketing function, harms intangible marketing assets, and ultimately destroys shareholder value, and they suggest ways to change the attitudes and behaviors of managers and the financial market. ■

Introduction

Managers have a wide array of alternative strategies they can undertake in running a business. These different alternatives yield differing cash flow streams. In order to maximize firm value, managers need to select those strategic alternatives that yield the overall highest discounted net present value. Thus, the strategic alternatives selected depend both on the expected cash flow stream and on the discount rate used. The discount rate determines the appropriate balance between current and future-term benefits.

At times, managers face short-term incentives that increase their effective discount rates. For example, managers might feel pressure to meet quarterly earnings expectations of financial analysts, they might be approaching the expiration of their stock option grants, or they might be evaluated based on current-period accounting performance measures. Under these conditions managers may over-emphasize strategic options that generate immediate results and may engage

in myopic management. Firms practicing myopic management forego strategies with superior future profits for those that generate immediate returns. This over-emphasis on short-term results has long attracted significant interest by academics, practitioners, the financial markets, and government agencies (Hayes and Abernathy 1980; Laverly 1996).

Myopic marketing management, i.e., cutting marketing expenditures that have predominantly long-term effects, has been of particular concern to marketing managers.¹ Many marketing activities impact intangible assets such as brand equity and customer satisfaction, which have long-term effects on business performance. Some past research has suggested that firms do engage in myopic marketing management by under-spending on marketing or by replacing marketing strategies that produce superior future profits with those that generate an immediate payback.

Aaker (1991, p. 10), for example, states that “it is tempting to ‘milk’ brand equity by cutting back on brand-building initiatives, such as advertising.” He notes that a decline in brand equity is not immediately obvious. Further, Aaker (1991) views the increased use of sales promotions, with immediately observable results but potentially deleterious long-term effects, as evidence of a short-term bias on the part of managers. Pauwels, Silva-Risso, Srinivasan, and Hanssens (2004) advance similar arguments and show empirically that sales promotions by automobile manufacturers have tended to have negative long-term effects on firm value. Hauser, Simester, and Wernerfelt (1994, p. 328), state that “All employees (managers, product designers, service providers, production workers, etc.) allocate their effort between actions that influence current period sales and actions that influence sales in the future. Unfortunately, employees are generally more focused on the short term than the firm would like.” They advocate the use of customer satisfaction measures in employee performance evaluation as a means to motivate employee

effort directed towards increasing profit in the long run. Lehmann (2004, p. 74) highlights a general “overconcern about short-term results” and advocates use of multiple metrics at all levels.

Although some past research has empirically explored myopic management, it has been sparse (and primarily theoretical or anecdotal),² has not focused on myopic marketing management per se, and has not addressed its impact on financial performance. Are firms engaging in myopic marketing management? How prevalent is the phenomenon of myopic marketing management? What implications does myopic marketing management have both for firms undertaking these behaviors and for financial markets? Our study seeks to answer these questions; we empirically investigate myopic marketing management phenomenon and assess its long-term performance consequences.

Theory of Myopic Management: Market Signaling in the Presence of Asymmetric Information

Traditional rational expectations, efficient financial markets theories predict that if managers care about stock prices, they will make efficient investment decisions, i.e., will not behave myopically. These traditional efficient market models assume that investors and managers have identical information. Under asymmetric information, specifically, when managers possess better information about the true state of a firm’s earnings and future prospects than the stock market the fundamental outcomes of traditional analysis are changed: managers now have incentives to behave myopically and the extent of myopic behavior increases with the importance managers attach to current-term stock price.

Stein (1989) provides an illustrative theoretical model showing how asymmetric information induces myopic managerial behavior. He starts with a traditional framework: (1) stock price is a

function of expected future earnings; (2) current-term stock price is a component in the managers’ utility function; (3) current-term earnings serve as a signal of long-term performance (i.e., current earnings contain information about future earnings).³ Under these three conditions, incentives for myopic management do not exist. Stein (1989) then introduces asymmetric information in the form of (4) managers’ ability to engage in inter-temporal allocation of earnings that investors cannot accurately discern. That is, observed earnings are equal to “natural” earnings plus the amount of earnings borrowed from future period, less the cost of past borrowed earnings: $Earnings_t = \text{“Natural” } Earnings_t + \text{“Borrowed” } Earnings_t - \text{Cost(“Borrowed” } Earnings_{t-1})$. Investors observe $Earnings_t$, but cannot decompose the observed amount into “natural” versus “borrowed” components. In other words, investors cannot distinguish whether enhanced current-term earnings are indicative of enhanced future-term performance or whether they come at the expense of future profits.

In this setting, the managerial discount rate is determined not just by the cost of capital (as it would in the absence of asymmetric information). Instead, it rises with the importance managers attach to current stock price and with the investors’ reliance on current-term earnings as signals of long-term performance. The resulting managerial discount rate is higher than justified by the cost of capital considerations, which leads to a short-run bias: managers are selecting strategies with greater current-term results over strategies with overall superior long-term profits. Managers engage in this “inter-temporal borrowing” of earnings to inflate current-term results to fool the stock market into expecting higher future earnings and, thus, to increase current stock price.

Stein (1989) points out that in equilibrium the market realizes that current-term earnings may be artificially inflated, and as a result, market participants discount the future-term implications of observed earnings. However, since the

market cannot distinguish between managers who engage in myopic management from those who do not (or do so to a lesser extent), it devalues all firms. This, in turn, puts pressure on all managers who care about their stock price to inflate current-term earnings, thus exacerbating the problem of myopic management.

Stein (1989) posits that the assets the myopic managers are most likely to sacrifice in the attempts to inflate earnings will be those that are not on the company's balance sheet (i.e., intangible assets) and that are not directly related to production. Most of the marketing assets would arguably fall into this category and, as such, be likely candidates for reduction by firms engaging in myopic management.

Study Context

Theoretical models allowing for asymmetric information indicate that incentives for myopic behavior increase with the importance managers place on current-period stock price. For example, the importance of the stock price will be greater to a manager on the day when his or her compensation is linked to the stock price (e.g., option exercise dates) or the day of a reverse leveraged buyout (LBO). A seasoned equity offering (SEO), the issuing of additional stock by a public company, is another event where the current stock price is of increased importance to managers. The amount of capital collected by an SEO-issuing firm is determined by its stock price on the day of the issue. Thus, during an SEO the importance of the current stock price is significantly increased and managers have incentives to inflate earnings to maximize SEO proceeds. As such, SEOs provide an ideal setting for studying myopic marketing management and the financial market response.

A great deal of work in finance and accounting has focused on the SEO context. Most relevant to our analysis are studies seeking to assess earnings management at the time of an SEO and the financial market response (e.g., Rangan 1998;

Teoh, Welch, and Wong 1998; Shivakumar 2000). These studies have focused on managers' attempts to inflate reported earnings at the time of an SEO by taking (i.e., manipulating) income-increasing accrual adjustments. Past research is consistent in finding that managers do attempt to manipulate accruals at the time of an SEO to inflate reported earnings. The studies differ in their conclusions as to whether the financial markets are fooled by this activity.

Our study differs from these studies in that we examine whether changes in management practices (as opposed to accounting practices) take place. Earnings management refers to managers using judgment in financial reporting and in structuring transactions to alter financial reports with the intent to mislead some stakeholders about the underlying economic performance of the company (Healy and Wahlen 1999). Earnings management most commonly takes place via contingencies and reserve allocations and the timing of revenue recognition. A fundamental distinction between earnings management and myopic management is that earnings management affects only the accounting numbers in financial reports and has no impact on firm actions, while myopic management impacts financial results through *real actions* (or inaction) firms undertake. We assess whether management is changing expenditure patterns (as opposed to accounting reporting) at the time of an SEO and the reaction of the financial markets to such changes in real activity.

Hypotheses

Myopic marketing management

Since they have increased interest in their firm's current-term stock price at the time of an SEO, managers have an incentive to engage in myopic marketing management. This leads to:

H1: In an attempt to enhance current-period stock price, managers will seek to artificially inflate current-term earnings by cutting marketing expenditures.

Hypothesis 1 predicts that at the time of an SEO, we would observe firms decreasing activities with current-term costs that exceed their current-term benefits, even if these activities have future-term benefits that justify their undertaking. Managers would, for example, decrease marketing efforts that have longer-term paybacks in order to inflate earnings. Thus, at the time of an SEO, we would observe a greater number of firms reporting a combination of higher-than-normal earnings and lower-than-normal marketing expenditures.

Market response to earnings

While managers have incentives to behave myopically, investors can be expected to realize that these incentives exist. Investors appreciate that results at the time of an SEO will not be as reflective of future-term results as financial results at other points in time. As such, we would expect investors to place less emphasis on financial results at the time of an SEO. This leads to:

H2: Earnings at the time of an SEO will be viewed as less indicative of firm performance than earnings observed during other periods.

One of the fundamental issues in accounting research has involved assessing the degree to which accounting measures contain information associated with stock returns. Beginning with Ball and Brown (1968), numerous studies have theoretically and empirically investigated earnings response coefficients, i.e., the relationship of stock returns to earnings shocks.⁴ Factors such as measurement error and persistence (i.e., autocorrelation) of earnings have been shown to influence earnings response coefficients. If the market believes that earnings at the time of an SEO contain more measurement error or are likely to be less persistent (i.e., are less indicative of future-term performance than earnings at other points in time), then the earnings response coefficient at the time of an SEO will be lower than at other periods.

Firm valuation

In contrast to the efficient markets hypothesis, a body of work suggests that the financial markets may be slow to incorporate the financial implications of strategic decisions (Eberhart, Maxwell, and Siddique 2004). Daniel and Titman (2004) summarize this literature stream by concluding that there is considerable evidence showing that investors under-react to information conveyed in management decisions. Rather than immediately impounding this information into the price of the stock, some research suggests that it may take years for the market to correctly price some types of strategic decisions.⁵

If the financial markets are fooled and are not able to accurately identify firms engaging in myopic marketing management, we would observe myopic firms being over-valued initially. In the future, as the consequences of unwarranted cuts in marketing spending are reflected in inferior performance, this over-valuation would be corrected. This delay in the market's ability to identify myopic firm behavior until its consequences are more fully reflected in accounting performance leads to:

H3: Future-period stock returns will be lower for firms that artificially inflated earnings by cutting marketing expenditures.

Long-term consequences

Hypothesis 3 suggests that investors are not able to fully distinguish myopic firms and will correct the initial over-valuation only in the future periods. An additional question, however, is whether the potential negative future outcomes of temporarily decreasing marketing spending outweigh the positive benefits of bringing in more funding from SEO proceeds that can be used to pursue new opportunities. In other words, what are the implications of myopic marketing management for the long-run value of a firm? A disruption in the flow of resources into marketing assets can adversely impact the firm's competitive position in the market, customer perceptions and attitudes, and

the stream of revenues (Srivastava, Shervani, and Fahey 1998).

We hypothesize that even a temporary unwarranted disruption in marketing spending can have substantial negative consequences on future performance. This leads to:

H4: The long-term consequences of engaging in myopic marketing management are negative.

Hypothesis Testing

Hypothesis 1

In order to test Hypothesis 1, we first develop and estimate forecasting models for size-adjusted earnings and for size-adjusted marketing expenditure series. We then forecast values for the series at the time of the SEO. The difference between the actual value of the series and the forecasted values allows us to determine

$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) > 0$	$(Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) > 0$	$(Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) < 0$
	Group 1	Group 2
$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) < 0$	Group 3	Group 4

whether the firm reports above or below normal size-adjusted earnings and marketing expenditures. Under Hypothesis 1, at the time of an SEO, we would observe a significantly greater proportion of firms jointly having earnings above forecast and marketing expenditures below forecast. That is, the proportion of firms with $(ROA_{i\tau} - \widehat{ROA}_{i\tau|i\tau-1}) > 0$ and $(Mktg_{i\tau} - \widehat{Mktg}_{i\tau|i\tau-1}) < 0$ (with SEO occurring at time period τ), will be significantly greater at the time of an SEO than at other periods. The null hypothesis is that there will be no significant differences in performance and resource allocation patterns observed at the time of an SEO than observed at other periods.

We find that the following fixed-effects first-order autoregressive panel data model provides a good approximation of the earnings and mar-

keting expenditures series in our data sample:

$$(X_{it} - \bar{X}_t) = \alpha_i + \phi * (X_{it-1} - \bar{X}_{t-1}) + \epsilon_{it}, \quad (1)$$

where X_{it} is the value of the series for firm i at time period t , X_{it-1} is its lagged value, and \bar{X}_t is the mean for series X at time period t . We use the $(X_{it} - \bar{X}_t)$ specification to control for time-period-specific effects. Model 1 indicates that the deviation of a series from the economy-wide mean depends on a firm-specific amount and the extent to which the series deviated from the economy-wide mean in the previous period. The coefficient α_i is the firm-specific constant and ϕ is the coefficient depicting the persistence of the series.⁶

After obtaining estimates of $\hat{\alpha}_i$ and $\hat{\phi}$, we can form forecasts and categorize firms into four groupings based on the forecast error pattern for size-adjusted earnings and marketing expenditures:

That is, the four groupings are:

Group 1: firms with positive ROA and positive marketing intensity shocks at the time of an SEO;

Group 2: firms with positive ROA and negative marketing intensity shocks at the time of an SEO;

Group 3: firms with negative ROA and positive marketing intensity shocks at the time of an SEO;

Group 4: firms with negative ROA and negative marketing intensity shocks at the time of an SEO.

Under Hypothesis 1, the proportion of Group 2 firms will be greater at the time of an SEO than is typical.

Hypothesis 2

Hypothesis 2 can be tested by estimating a

standard earnings response model expanded to allow for a possible difference related to an SEO. That is, we estimate a model of the form:

$$Ret_{it} = \beta_1 \Delta ROA_{it} + \beta_2 \Delta ROA_{it} * d^{SEO}_{it} + \beta_3 * d^{SEO}_{it} + \sum_{j=1}^J \gamma_{0j} * Industry(j) + \sum_{t=1}^T (\gamma_{1t} + \gamma_{2t} * \log MV_{it-1} + \gamma_{3t} * \log BMV_{it-1}) * Time_t + \eta_{it} \quad (2)$$

where ret_{it} is the continuously compounded stock return for firm i at time t , d^{SEO}_{it} is a categorical variable that takes on the value of 1 if firm i had an SEO at time t and 0 otherwise, ΔROA_{it} is the unanticipated change in accounting business performance (i.e., the difference between the expected and realized performance, operationalized as the time series residual from Equation 1). $Industry(j)$ is the indicator function that takes on the value 1 if the firm is in industry j , 0 otherwise. To control for risk, the model includes the log of lagged market value ($\log MV_{it-1}$), and the log of lagged book-to-market value ($\log BMV_{it-1}$), both of which are allowed to have effects that vary by year. The model also allows for time-period-specific intercepts (γ_{1t}).

The coefficient β_1 is the earnings response coefficient and β_2 reflects the differential, if any, associated with the response at the time of an SEO. Under the null hypothesis that the financial markets view financial performance around an SEO as equally reflective of future-term results as financial performance reported at other periods, $\beta_2 = 0$. Under Hypothesis 2 we expect $\beta_2 < 0$.

Hypothesis 3

We postulated that firms with below predicted levels of marketing intensity in the presence of above normal levels of ROA are more likely to have engaged in myopic marketing management than other firms. We then hypothesized that the financial markets may not be fully impounding the consequences of myopic management into the price of the stock when it occurs but rather only after its consequences

have impacted accounting financial performance. If, in fact, myopic managers are able to fool the stock market at the time of an SEO, and market participants impound the consequences of a short-term emphasis only when the impact of the strategy has been more established, then myopic firms will tend to have lower stock returns in the periods following an SEO.

We can test Hypothesis 3 by examining abnormal (i.e., risk-adjusted) stock returns for myopic and non-myopic firms in the periods following an SEO. We do so by estimating the following model:

$$abnStkR_{i\tau+k|\tau} = \lambda_{1k} * d^{ME(+),ROA(+)}_{i\tau} + \lambda_{2k} * d^{ME(-),ROA(+)}_{i\tau} + \lambda_{3k} * d^{ME(+),ROA(-)}_{i\tau} + \lambda_{4k} * d^{ME(-),ROA(-)}_{i\tau} + \eta_{i\tau+k} \quad (3)$$

for $k = 1, 2, 3$, and 4, where $abnStkR_{i\tau+k|\tau}$ is the k -period ahead (i.e., future multi-period) risk-adjusted (i.e., abnormal) cumulative stock return for firm i , with an SEO occurring at time τ , $d^{ME(+),ROA(+)}_{i\tau}$ is a categorical variable that takes on the value of 1 if firm i was categorized as a Group 1 firm and 0 otherwise, $d^{ME(-),ROA(+)}_{i\tau}$ is a categorical variable that takes on the value of 1 if firm i was categorized as a Group 2 firm and 0 otherwise, $d^{ME(+),ROA(-)}_{i\tau}$ is a categorical variable that takes on the value of 1 if firm i was categorized as a Group 3 firm and 0 otherwise, and $d^{ME(-),ROA(-)}_{i\tau}$ is a categorical variable that takes on the value of 1 if firm i was categorized as a Group 4 firm and 0 otherwise.⁷

Under the efficient markets hypothesis (which is the basis for the null hypothesis for Hypothesis 3), no differences in the post-SEO stock returns should exist for any grouping of firms defined based on information available at the time of an SEO. As such, under the null hypothesis we would be unable to reject $\lambda_{1k} = \lambda_{2k} = \lambda_{3k} = \lambda_{4k} = 0$. Under Hypothesis 3, however, we would expect the myopic group to underperform other firms in the post-SEO periods (i.e., $\lambda_{2k} < 0$).

Hypothesis 3 involves a comparison of abnormal (i.e., risk-adjusted) stock returns for longer-term horizons beginning the year subsequent to the SEO. Research in finance (e.g., Barber and Lyon 1997) has documented biases in tests associated with some of the commonly used approaches for computing abnormal returns over a long-term horizon. Test statistics based on abnormal returns benchmarks using, for example, the market model or the three-factor model developed by Fama and French (1993), are mis-specified because of problems associated with, for example, new listing, rebalancing, and skewness biases. To overcome these issues, Barber and Lyon (1997) recommend a procedure for assessing abnormal returns that involves matching sample firms to control firms of similar sizes and book-to-market ratios. They note that this control firm approach yields “well-specified test statistics in virtually all sampling situations considered.” Following Barber and Lyon (1997), we choose the control firm among all firms in the same year and in the same two-digit SIC group not issuing SEOs and with a market value of equity between 70% and 130% of that of the sample firm and whose book-to-market ratio is closest to that of the sample firm.⁸ We then calculate the abnormal return measure as the difference in multi-year-ahead stock return for the firm undertaking an SEO versus the multi-year-ahead stock return for the matched firm.⁹

Hypothesis 4

Hypothesis 3 assesses the degree of “punishment” a myopic firm will endure in the post-SEO periods. It does not answer the question of what is the total net effect of myopic marketing management. In order to assess that, we need to modify Equation 3 to include the SEO period, when the myopic firms presumably commandeer the benefits of their earnings inflation strategies. To examine the total returns to firms that engaged in myopic marketing management versus those that did not, we estimate the following model:

$$abnStkR_{i\tau+j|\tau} = \gamma_{1j} * d_{i\tau}^{ME(+),ROA(+)} + \gamma_{2j} * d_{i\tau}^{ME(-),ROA(+)} + \gamma_{3j} * d_{i\tau}^{ME(+),ROA(-)} + \gamma_{4j} * d_{i\tau}^{ME(-),ROA(-)} + \eta_{i\tau+j} \quad (4)$$

for $j = 0, 1, 2, 3$, and 4 , where $d_{i\tau}^{ME(+),ROA(+)}$, $d_{i\tau}^{ME(-),ROA(+)}$, $d_{i\tau}^{ME(+),ROA(-)}$, and $d_{i\tau}^{ME(-),ROA(-)}$ are defined as previously and $abnStkR_{i\tau+j|\tau}$ is the multi-period risk-adjusted stock return for firm i , with an SEO occurring at time τ .

Hypothesis 3 addresses the future-term effects of myopic marketing management. That is, to what extent do the financial markets adjust the valuation of myopic firms subsequent to the year of an SEO? Hypothesis 4 seeks to assess the total effect of myopic marketing management taking into account the financial market reaction at the time of an SEO. Under Hypothesis 4 we expect $\gamma_{20} > 0$, $\gamma_{20} \geq \gamma_{21} \geq \gamma_{22} \geq \gamma_{23} \geq \gamma_{24}$, and $\gamma_{24} < 0$.

Data

We obtained our sample of firms issuing an SEO between January 1970 and December 2001 and the issue date from the Thomson Financial Securities database. We accessed the primary, full coverage, and research COMPUSTAT databases for annual accounting information for 1966-2002 and the University of Chicago’s Center for Research in Security Prices (CRSP) data tapes for monthly stock returns data for 1970-2004. Merging the SEO, COMPUSTAT, and CRSP data samples yielded an unbalanced pooled cross-sectional time series panel consisting of about 70,000 firm-year observations where at least some accounting data were available and a total of 2,631 SEO events occurring during the 1970-2001 time period.

In order to minimize any potential survivorship bias and to preserve degrees of freedom, we did not impose the restriction that all the account-

Table 1

Descriptive Statistics

The sample includes all available 1966-2002 COMPUSTAT data for those firms that had at least one SEO reported in the Thomson Financial Securities database for the January 1970-December 2001 period. Variable definitions with respective COMPUSTAT data numbers are presented below the table. The stock returns data represent continuously compounded annualized stock returns for the SEO firms and come from the University of Chicago's Center for Research in Security Prices (CRSP) monthly returns data tapes.

	# obs	Mean	Standard Error of the Mean	5%	Median	95%
ROA	69,107	.099	.0006	-.170	.121	.279
Marketing Intensity	29,779	.290	.0012	.052	.245	.693
Stock Return	61,541	.028	.0022	-.924	.067	.812

Variable Definitions with respective COMPUSTAT data numbers for firm i in year t :

$$ROI_{it} = \frac{\text{Operating Income before Depreciation}_{it}}{\text{Assets}_{it}} = \frac{(\text{data13})_{it}}{(\text{data6})_{it}}$$

$$\text{Marketing Intensity}_{it} = \frac{\text{SG \& A Expense}_{it} - \text{R \& D Expense}_{it}}{\text{Assets}_{it}} = \frac{(\text{data189})_{it} - (\text{data46})_{it}}{(\text{data6})_{it}}$$

$$\text{Stock Return}_{it} = \log \prod_{\text{month}=1}^{12} (1 + \text{holding period return}_{i\text{month}})$$

ing and stock return data be available for a firm to be included in our sample. Neither did we require that the data were available for a certain number of periods prior to and following a seasoned equity issue. As such, we do not have complete data for all SEOs in our sample and, as a result, the actual sample size varies across the estimating models depending on the variables used in the analysis.

Table 1 provides descriptive statistics for variables used in our analysis. We used (Operating Income before Depreciation) divided by Assets as our measure of ROA (i.e., COMPUSTAT Data13/Data6). Past research has shown that it has similar or greater information content to that of related, alternative size-adjusted earning measures. However, to assess the robustness of our findings we replicated our analysis with alternative accounting measures of firm per-

formance (e.g., Net Income and Income before Extraordinary Items) and found results similar to those we report.

We use Selling and General Administrative (SG&A) expenditures minus R&D expenditures divided by Assets (COMPUSTAT (Data189–Data46)/Data6) as our proxy for marketing expenditure intensity. The SG&A measure contains items such as marketing expenses, advertising, engineering, and R&D expenditures, all of which are likely candidates as expenditures that some managers may view as “discretionary.” SG&A has been used in past research (e.g., Dutta, Narasimhan, and Rajiv 1999; Kim, McAlister, and Srinivasan 2005) as a proxy for marketing spending. We refine the measure to better capture its marketing-related portion by excluding R&D expenses. Analysis based on our marketing expenditure measure

Table 2
Fixed Effects Panel Data Forecast Models

$$(X_{it} - \bar{X}_t) = \alpha_i + \phi * (X_{it-1} - \bar{X}_{t-1}) + \varepsilon_{it}$$

The number of observations differs across the series as not all firms reported all measures across all time periods. Standard errors are in parentheses, *t*-statistics in brackets.

	ϕ	# of observations	F-statistic
ROA	.428** (.011) [37.43]	55,617	1,400.65
Marketing Intensity	.458** (.025) [18.26]	21,588	333.25

** $p < .01$.

(SG&A – R&D) can be expected to provide more powerful tests than an analysis based on a single marketing spending item (e.g., advertising), because it includes more expenditure items (such as sales force costs and promotional spending) that firms may seek to limit in an attempt to inflate earnings at the time of an SEO. Further, (SG&A – R&D) analysis will better delineate myopic firms as it is able to separate firms that reduced expenditures as opposed to firms that merely shifted expenditures from one marketing-related SG&A item to another.

Empirical Analysis

Assessing the prevalence of myopic marketing management at the time of an SEO

We begin our analysis by estimating fixed-effects autoregressive panel data forecast models (Equation 1) for ROA and marketing intensity. As depicted in Table 2, ROA and marketing intensity series exhibit significant persistence, .428 and .458, respectively. Neither series has unit roots (which we formally document through additional tests), nor do they dissipate immediately. The estimated persistence coefficients suggest that these series decay

over a number of periods. This result means that deviations occurring in a given year contain information about the future term.

Our test of the prevalence of myopic marketing management involves examination of the proportion of Group 2 firms at the time of an SEO, i.e., firms with $(ROA_{it} - \widehat{ROA}_{it|it-1}) > 0$ and $(Mktg_{it} - \widehat{Mktg}_{it|it-1}) < 0$. Under the hypothesis that managers have a tendency to engage in myopic management at the time of an SEO, a greater proportion of firms will be in Group 2 than is typical. We use the proportion of firms with $(ROA_{it} - \widehat{ROA}_{it|it-1}) > 0$ and $(Mktg_{it} - \widehat{Mktg}_{it|it-1}) < 0$ in our sample in periods other than the year of an SEO as a measure of “typical.” Table 3 reports the results of this analysis.

In non-SEO years 27.0% of firms typically fall into the Group 2 category. This proportion is substantially and significantly ($p < .001$) different at the time of an SEO, when approximately 38.7% of firms are categorized in Group 2. This finding is consistent with Hypothesis 1 and the prediction of Stein’s (1989) model—a significant number of firms appear to be inflating earnings at the time of an SEO through a reduction in marketing expenditures.

By examining the proportion of firms in the other groupings, it can be ascertained where this increase in the proportion of Group 2 firms is coming from. Compared to the norm, we see a dramatic reduction in Group 3 categorized firms (i.e., firms with $(ROA_{it} - \widehat{ROA}_{it|it-1}) < 0$ and $(Mktg_{it} - \widehat{Mktg}_{it|it-1}) > 0$) at the time of an SEO. Only 12.7% of firms are classified as Group 3 in SEO years, compared to 24.2% in non-SEO years. We are also seeing a drop in the proportion of Group 1 firms. At the time of an SEO 20.5% of firms are classified as Group 1, compared to 26.1% in non-SEO years. As such, during the period of an SEO we observe a 1/3 increase (49.7% in the non-SEO years to 66.8% in the year of an SEO) in the proportion of firms decreasing marketing expenditures below their expected value. The majority of this

Table 3

The Prevalence of Myopic Marketing Management at the Time of an SEO

	Proportion of observations in the year when an SEO was issued	Proportion of observations in years when no SEO was issued
	N = 2,631	N = 23,510
Group 1		
$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) > 0, (Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) > 0$	20.5%	26.1%
Group 2		
$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) > 0, (Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) < 0$	38.7%	27.0%
Group 3		
$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) < 0, (Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) > 0$	12.7%	24.2%
Group 4		
$(ROA_{i\tau} - \widehat{ROA}_{i\tau i\tau-1}) < 0, (Mktg_{i\tau} - \widehat{Mktg}_{i\tau i\tau-1}) < 0$	28.1%	22.7%
Total	100%	100%

shift is showing up in an increase in Group 2 firms (approximately 12%), with the remainder showing up as increase in Group 4 firms (5.4%).¹⁰

Market response to earnings at the time of an SEO

To what extent do market participants believe these improved earnings numbers? If investors are aware that earnings inflation is taking place, they will rely less on the information reported at the time of an SEO. As a result, the earnings response coefficient would be smaller at the time of an SEO than in other periods. We investigate this conjecture by estimating an earnings response model that allows for potential differences in effect associated with an SEO, i.e., estimating Equation 2. Table 4 reports the results of estimating Equation 2.¹¹

The earnings response coefficient across periods other than those when an SEO is issued is 2.120. This result is consistent with extensive literature on the information content of accounting information and earnings surprises. A shock to ROA contains information both about the change in the current financial position of the firm and also about prospects for future-term performance. When investors observe an unanticipated shock, they modify their expectations about future earnings and hence the value of the firm. The estimate of 2.120 is in fairly close correspondence with earnings response coefficients reported in previous research. For example, Kormendi and Lipe (1987) report a median earnings response coefficient of 2.50 across their sample of 145 firms.

Table 4

Earning Response Coefficient at the Time of an SEO

$$Ret_{it} = \beta_1 \Delta ROA_{it} + \beta_2 \Delta ROA_{it} * d^{SEO}_{it} + \beta_3 * d^{SEO}_{it} + \sum_{j=1}^J \gamma_{0j} * Industry(j) + \sum_{t=1}^T (\gamma_{1t} + \gamma_{2t} * \log MV_{it-1} + \gamma_{3t} * \log BMV_{it-1}) * Time_t + \eta_{it}$$

Standard errors are in parentheses, *t*-statistics in brackets,

β_1	2.120** (.029) [73.38]
β_2	-.518** (.095) [-5.43]
β_3	.185** (.007) [26.58]
#obs = 49,576	
adj R^2 = .282	
** $p < .01$.	

We find, however, that the earnings response coefficient is significantly lower at the time of an SEO. The estimated differential of $-.518$ is significantly different from zero at the 1% level. This negative differential is consistent with market participants placing less weight on the information contained in ROA at the time of an SEO than they do during other periods. In essence, this reduced weight can be viewed as enhanced measurement error in the ROA estimate. Consistent with Hypothesis 2, market participants view ROA at the time of an SEO as having potentially more error as an indicator of the “true” underlying profitability of the firm. Another way of viewing the reduced earnings response coefficient is that market participants realize that ROA at the time of an SEO is likely to have lower persistence (i.e., be less sustainable) than ROA at other times. Lower expected persistence results in lower earnings response coefficients.¹²

Firm valuation at the time of an SEO

Table 4 results indicate that market participants are aware that earnings inflation is occurring and place a lower weight on reported earnings in formulating expectations of future-term profits. However, are market participants able to fully distinguish between the firms behaving myopically versus those that are not and do they impound this information into the price of the stock?

Table 5 presents a test of Hypothesis 3 that myopic firms will have lower stock return in the years subsequent to an SEO because the financial markets are unable to recognize myopic management at the time of an SEO and are thus unable to properly value myopic firms. Firms are categorized into the four previously defined groupings based on ROA and marketing expenditure shocks occurring at the time of an SEO.

One year after an SEO, Group 2 firms underperform their matched counterparts by -16.5% . The differential is -31.5% for the two-year cumulative return subsequent to an SEO. Then, it is -40.3% for three years and -41.4% for four years subsequent to an SEO. All these differences are highly statistically significant. These firms, which are categorized based on an increased likelihood to have engaged in myopic marketing management, appear not to be properly valued by the stock market at the time of an SEO. The eventual underperformance of myopic firms in the years subsequent to an SEO attests to the market’s not appreciating the implications underlying a combined positive ROA shock and negative marketing intensity shock (i.e., a greater likelihood of myopic marketing management). Only over time, when the financial implications resulting from undertaking this strategy are realized, do the financial markets impound the value implications of engaging in myopic marketing management. As the four-year abnormal return is approximately the same as the three-year abnormal return, it appears that it takes approximately three years

Table 5

Are Firms Properly Valued at the Time of an SEO? The Role of Marketing Intensity and ROA Shocks

$$Abnormal\ StkR_{i\tau+k|\tau} = \lambda_1 * d^{ME^{(+)}ROA^{(+)}}_{i\tau} + \lambda_1 * d^{ME^{(-)}ROA^{(+)}}_{i\tau} + \lambda_3 * d^{ME^{(+)}ROA^{(-)}}_{i\tau} + \lambda_4 * d^{ME^{(-)}ROA^{(-)}}_{i\tau} + \eta_{i\tau+k}$$

Standard errors are in parentheses, *t*-statistics in brackets,

	One year after an SEO: one-year abnormal stock return	Two years after an SEO: cumulative two-year abnormal stock return	Three years after an SEO: cumulative three-year abnormal stock return	Four years after an SEO: cumulative four-year abnormal stock return
	<i>k</i> = 1	<i>k</i> = 2	<i>k</i> = 3	<i>k</i> = 4
λ_1	.049 (.035) [1.39]	.033 (.051) [.64]	.122 (.064) [1.92]	.146* (.073) [2.00]
λ_2	-.165** (.026) [-6.35]	-.315** (.037) [-8.44]	-.403** (.046) [-8.81]	-.414** (.054) [-7.68]
λ_3	.006 (.045) [.13]	.018 (.066) [.27]	.072 (.080) [.90]	.191* (.095) [2.01]
λ_4	-.054 (.030) [-1.84]	-.034 (.043) [-.80]	-.073 (.051) [-1.43]	-.032 (.060) [-.54]
#obs	2,068	1,945	1,799	1,569
F-statistic	11.42	18.11	21.05	16.83

* $p < .05$, ** $p < .01$.

for the financial markets to fully impound the value implications of myopic marketing management into the price of the stock.

In contrast, for one, two, and three years after an SEO, we observe no abnormal stock returns for groups 1, 3, and 4. However, by year 4, we see statistically significant positive abnormal returns of 14.6% for group 1 and of 19.1% for group 3, i.e., the two groups that had an increase in marketing spending at the time of an SEO. This finding is consistent with the forecast of the Stein's (1989) model: since the market anticipates earnings inflation but is not able to

distinguish myopic firms, it de-values all firms at the time of an SEO. Thus, initially the myopic firms are over-valued and the non-myopic firms are under-valued. Over time, however, we observe a slow systematic adjustment in the valuation of myopic and non-myopic firms. These results suggest that the myopic marketing management on the part of myopic firms has significant negative externality for the non-myopic firms issuing SEOs: the non-myopic firms are undervalued at the time of an SEO and, thus, are not able to collect a fair price for their new equity.

Long-term consequences of myopic marketing management

We examine the total impact of myopic marketing management on the value of the firm by assessing cumulative abnormal stock returns computed from the year of an SEO. Does the benefit of higher stock return in the year of an SEO outweigh the loss to value in the subsequent years? Table 6 presents the results of this analysis.

In the year of an SEO, the myopic firms realize abnormal returns of 13.4%. The market response is approximately the same as to that of Group 1 firms. As such, we do not observe any discounting on the part of the financial markets of the earnings that may be artificially inflated through a reduction in marketing spending. That is, the markets react the same to firms with positive earnings shocks, regardless of whether the marketing expenditure shock is positive or negative.

Overtime, we see that abnormal positive returns for group 1 persist and do not dissipate over time and we observe no abnormal returns for groups 3 and 4. For firms engaging in myopic marketing management, however, we observe a dramatic reversal in fortunes in the years subsequent to an SEO. One year after an SEO, the cumulative returns fall to -3.2% , which is not statistically significant. However, the negative returns in subsequent years (as depicted in Table 5) become more prominent. The three-year cumulative abnormal return is -17.3% and statistically significant. The positive returns realized at the time of the SEO become dominated by the negative returns in the subsequent two years. The pattern continues with the Group 2 firms realizing a four-year abnormal cumulative stock return three years after an SEO of -25.1% . The five-year cumulative abnormal return is about the same (-26.0%). The short-term gains of implementing a myopic strategy are overcome by the long-term consequence: a substantial drop in market value of approximately 26%.

To further illustrate the consequences of myopic behavior, we can follow the market value of

SEO firms (Figure 1). Suppose we have two investors. At the beginning of the year when an SEO was issued, one investor buys a portfolio of firms that are categorized as Group 2 firms and the other investor buys a portfolio of firms that are categorized as groups 1, 3, and 4. As the two investors have the same amount of money initially (\$100), the two portfolios are valued the same at the start of the SEO year. At the end of the SEO year, the Group 2 investor's portfolio is at \$113.44 and outperforms the groups 1, 3, and 4 portfolio as a consequence of the favorable market response to the positive earnings shock. The groups 1, 3, and 4 portfolio is being dragged down by underperformance of the Group 3 stocks included in portfolio. At the end of the year subsequent to an SEO the value of the Group 2 portfolio declines to \$96.79 and is \$7.32 less than of the groups 1, 3, and 4 portfolio, but this difference is not statistically significant at 5% level. However, the value of the Group 2 portfolio continues to decline. At year three it is \$22.79 below the groups 1, 3, and 4 portfolio and further declines to \$32.71 and \$36.94 below the value of the groups 1, 3, and 4 portfolio. Each of these differences is highly significant. The management practices of Group 2 firms are destroying value relative to the management practices of the other SEO firms. By the end of the five years the investor with Group 2 portfolio loses more than a quarter of the initial investment.

Conclusion

We find evidence consistent with managers engaging in myopic marketing management at the time of an SEO. Some managers are limiting marketing expenditures in an effort to inflate current-term earnings, and thereby stock price. At the time of the SEO, the financial markets do not appear to be able to distinguish firms engaging in myopic marketing management from those firms that are not. In particular, myopic firms are overvalued at the time of an SEO, i.e., they have negative abnormal returns in subsequent years. While myopic

Table 6

Total Financial Returns to Myopic Marketing Management over the Long Term

$$Abnormal\ StkR_{i\tau+j|\tau} = \gamma_{1j} * d^{ME^{(+)}ROA^{(+)}}_{i\tau} + \gamma_{2j} * d^{ME^{(-)}ROA^{(+)}}_{i\tau} + \gamma_{3j} * d^{ME^{(+)}ROA^{(-)}}_{i\tau} + \gamma_{4j} * d^{ME^{(-)}ROA^{(-)}}_{i\tau} + \eta_{i\tau+j}$$

Standard errors are in parentheses, *t*-statistics in brackets,

	The year of an SEO: current-year abnormal stock return	One year after an SEO: cumulative two-year abnormal stock return	Two years after an SEO: cumulative three-year abnormal stock return	Three years after an SEO: cumulative four-year abnormal stock return	Four years after an SEO: cumulative five-year abnormal stock return
	<i>j</i> = 0	<i>j</i> = 1	<i>j</i> = 2	<i>j</i> = 3	<i>j</i> = 4
γ_1	.128** (.028) [4.58]	.183** (.047) [3.87]	.178** (.060) [2.94]	.277** (.071) [3.89]	.281** (.081) [3.48]
γ_2	.134** (.021) [6.54]	-.032 (.035) [-.92]	-.173** (.044) [-3.97]	-.251** (.051) [-4.94]	-.260** (.059) [-4.39]
γ_3	-.059 (.036) [-1.65]	-.049 (.061) [-.80]	-.026 (.078) [-.34]	.039 (.090) [.44]	.133 (.105) [1.27]
γ_4	.034 (.023) [1.45]	-.021 (.040) [-.53]	.004 (.050) [.08]	-.039 (.057) [-.68]	-.017 (.067) [-.25]
#obs	2,127	2,057	1,934	1,788	1,558
F-statistic	17.16	4.19	6.14	10.05	8.26

* $p < .05$, ** $p < .01$.

marketing management has some short-term benefits in terms of higher current-term earnings and stock price, it has a detrimental long-term impact on firm value. Myopic firms have long-term stock returns significantly lower than other firms.

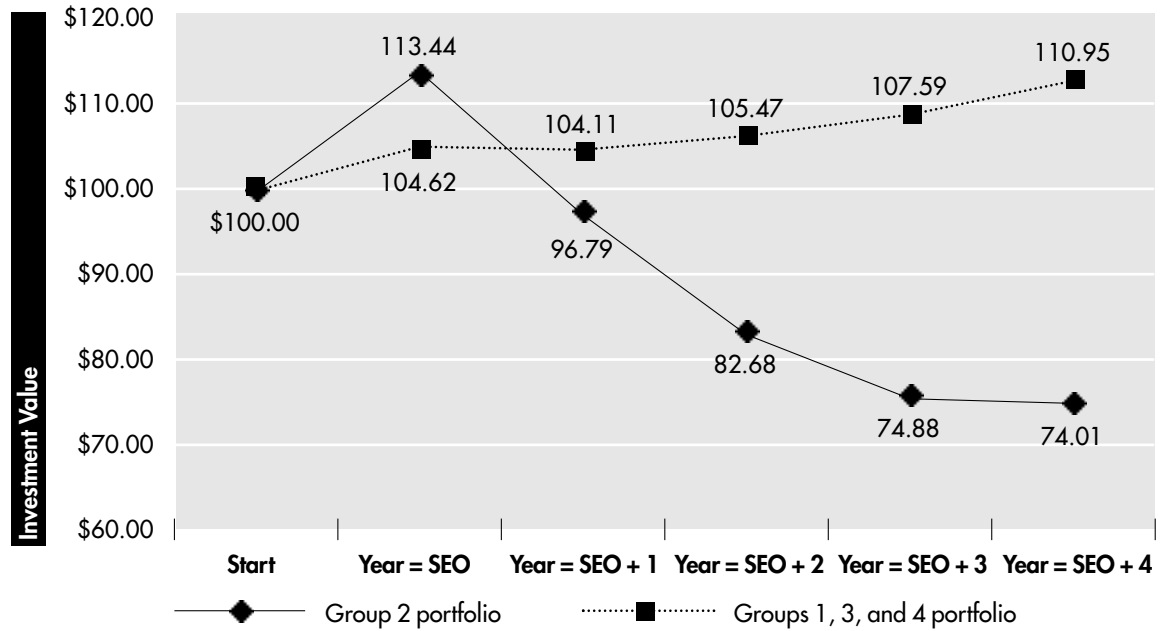
Conclusions of marketplace inefficiency must be made cautiously (all too often an alternative explanation consistent with efficient markets provides a better depiction of apparent anomalies). However, our results indicate that the financial markets are not properly valuing at the time of an SEO firms engaged in myopic mar-

keting management. This finding is invariant to alternative measures of abnormal stock returns. Only over time are the financial implications of myopic management fully impounded into firm valuation. The inability of the financial markets to correctly price firms engaging in myopic management provides an incentive for some managers to undertake strategies that enhance current-term earnings at the expense of long-term profitability in order to temporally inflate the firm's stock price.

While our analysis focused on myopic marketing at the time of an SEO, our results are likely

Figure 1

Performance of SEO Firm Portfolios: Group 2 Portfolio versus Group 1, 3, and 4 Portfolio



to generalize beyond this specific context. The same types of incentives that induce myopic marketing management at the time of an SEO exist in many other situations. For example, a survey by Graham et al. (2004) found that when faced with a possibility of falling below a quarterly earnings target, 80% of CFOs say that they would decrease discretionary expenditures such as advertising, 55% said that they would delay a start of a new project, and 39% said that they would provide incentives for customers to buy more products in the current quarter. In general, managers have incentives to behave myopically when (1) performance evaluation depends on a current-term outcome measure and (2) they can engage in an inter-temporal shifting of expenditures that cannot be fully discerned by the evaluator. Myopic marketing management impairs marketing function, harms intangible marketing assets, and ultimately destroys shareholder value.

What can be done to reduce myopic management practices? It is our view that a quick and simple fix is unrealistic. Changing the attitudes and practices of the financial markets and

managers is likely to be a slow process.

However, certain steps can help facilitate this transformation.

First, managers need to improve their information disclosure strategies, i.e., what and how they communicate to the financial community (Lev 1992). If managers want the financial markets to appreciate the implications of investing in marketing assets (e.g., having a long-term horizon), they need to better articulate their marketing strategy (and its intangible outcomes) to the financial community. Since the corporate entity has an indefinite life, its value is determined not just by current-term results, but also by future performance. Thus, investors have an incentive to appreciate a strategy with favorable long-term profit implications and to downgrade the stock price of firms that restrict expenditures with longer-term payoffs. Many managers believe that their voluntary disclosures have no impact. Yet, theory and empirical evidence indicate that voluntary disclosures can have significant and long-lasting consequences. Information disclosures—for example, new product announce-

ments (Chaney, Devinney, and Winer 1991) or “explaining” financial results—have been shown empirically to affect financial market outcomes such as share price, trading volume, and bid-ask spreads. Firms that send credible signals about their marketing strategy and future prospects will be freer to undertake those strategies that improve long-term performance. Conversely, firms unable to provide these signals will be viewed less favorably by the financial markets.

Second, firms need to improve internal monitoring of marketing assets and resource allocation. Formal organizational processes can help mitigate opportunistic management behaviors. For example, Cheng (2004) showed that CEO compensation committees are successful in reducing myopic cuts in R&D spending. Managers will be less likely to manage firm resources myopically if they are held accountable and are evaluated based not only on the accounting earnings measures, but also on the health of the marketing assets (brand equity, customer satisfaction, etc.). At times, a jump in earnings occurring jointly with a reduction in marketing expenditures may be the result of a firm benefiting from previous investments. For example,

Bayus, Erickson, and Jacobson (2003) find that this occurs subsequent to a new product introduction in that products that lag behind the technology frontier require more intensive demand-creating expenditures. However, it may also signal myopic marketing management. As such, the rationale for a cut in marketing expenditures needs to be more fully examined rather than applauded.

Rust, Ambler, Carpenter, Kumar, and Srivastava (2004, p. 76) state that “marketers have not been held accountable for showing how marketing expenditures add to shareholder value.” This lack of accountability can lead to an over- or an under-investment in marketing assets. It also breeds an environment where some managers will seek to artificially inflate business prospects by cutting back on marketing expenditures. Our analysis shows that the long-term negative repercussions of engaging in myopic marketing management are considerable. Financial markets and managers must appreciate that marketing assets are essential to wealth creation and that marketing spending should not be treated as discretionary. ■

Notes

1. Myopic marketing management has commonalities with the classic concept of “marketing myopia” (Levitt 1960). Both deal with a lack of farsightedness. However, while marketing myopia emphasizes problems with defining the business too narrowly, myopic marketing management relates to an over-emphasis on the current term.

2. Past research has provided some empirical insights into myopic management. For example, Dechow and Sloan (1991) found that executives tend to reduce R&D spending in their final year before retirement. Bushee (1998) reports that having a large proportion of institutional investors exhibiting transient ownership characteristics increases the probability of decreases in R&D expenditures. Roychowdhury (2003) reports evidence of firms giving price discounts to temporarily boost sales and increase earnings when they are close to a zero earnings benchmark.

3. The results of numerous time series studies confirm that abnormal earnings do not dissipate immediately but rather exhibit some persistence and that investors are aware of this.

4. Kothari (2001) provides a survey of this literature.

5. A competing interpretation to explain these results that are apparently inconsistent with the efficient markets hypothesis is “the bad models problem” Fama (1998). That is, any test of efficient markets depends on assumptions about expected return. Under this competing interpretation stock return anomalies are attributed to a mis-specification of the risk characteristics of the firm and the pricing of this risk, i.e., the estimate of expected return is inaccurate. Fama and French (1996) show, for example, that the over-reaction anomaly reported by DeBondt and Thaler (1985) vanishes in a three-factor risk model. This “bad model” consideration dictates that it is critical in studies assessing long-run abnormal returns to make use of properly benchmarked measures, e.g., Barber and Lyon (1997), and to assess the sensitivity of the results to alternative abnormal returns calculations. We undertake both steps in our study.

6. To obtain estimates of the parameters α_i and ϕ , we follow the Anderson and Hsiao (1982) procedure, to estimate an autoregressive coefficient in the presence of fixed effects. We begin by taking first differences of the data to

remove firm-specific fixed effects α_i . We then use $(X_{it-2} - \bar{X}_{t-2})$ and $(X_{it-3} - \bar{X}_{t-3})$ to form an instrumental variable estimate of $[(X_{it-1} - \bar{X}_{t-1}) - (X_{it-2} - \bar{X}_{t-2})]$ to address the correlation of $[(X_{it-1} - \bar{X}_{t-1}) - (X_{it-2} - \bar{X}_{t-2})]$ with the error $[\varepsilon_{it} - \varepsilon_{it-1}]$ induced by first-differencing of the data. This estimation procedure generates consistent (i.e., asymptotically unbiased) estimates of the parameter ϕ . Indeed, with our large sample size, we find that alternative consistent estimators generate results in close correspondence to those reported in Table 2. Once we obtain an estimate of $\hat{\phi}$, we can calculate $\hat{\alpha}_i$ as the mean of $(X_{it} - \bar{X}_t) - \hat{\phi}*(X_{it-1} - \bar{X}_{t-1})$ over firm i 's observations series. To insure that our estimates of persistence would not be sensitive to outliers, we set 1% of the extreme observations for the accounting variables to missing. In this way, the estimates would be representative of the typical dynamic behavior of the accounting series. Other estimation approaches, which would similarly minimize the impact of extreme data points, generated similar autoregressive estimates to those we report. For example, the mean of the estimated coefficients for firm-specific AR(1) models is in close correspondence to that reported in Table 3. To the extent that our estimates of persistence are inaccurate, this would lead to a potential misclassification of firms as having positive versus negative surprises to *ROA* or discretionary expenditures. A consequence of misclassification is that tests of differences in abnormal returns between groupings (i.e., hypotheses 3 and 4) would be biased toward zero, i.e., the tests would tend not to find a stock return differential among firm groupings.

7. An equivalent specification to Equation 3 would have an intercept and three categorical variables. In this specification, the categorical variables would reflect differences from the "base case grouping." The coefficients in Equation 3, with four categorical variables and no intercept, provide for a direct test of the difference in each group's return from a zero abnormal return.

8. In the few cases where we were unable to identify a

matching firm at the two-digit SIC level, we searched for a match at a one-digit SIC level. In the cases where no match was found at the one-digit SIC level, we searched for a matching firm with no SIC constraint.

9. We replicated all our analyses using alternative returns measures (e.g., raw, market-adjusted returns, market-, size- and book-to-market-adjusted returns) and found results in a very close correspondence to those we report.

10. The 5.4% increase in Group 4 firms perhaps suggests that we are not able to perfectly isolate all myopic firms into Group 2 and some of the myopic firms are present in Group 4. It is possible that some firms with inferior financial performance are also engaging in myopic marketing management in an attempt to reduce the negative gap between their actual and predicted performance; they inflate their financial performance results at the expense of marketing spending, but are not able to completely bridge that gap.

11. We have also made use of GLS estimation (in particular, a random effects model) to allow for the potential firm-specific differences and found that in this case OLS and GLS estimation produce virtually identical results.

12. The coefficient estimate for the categorical SEO variable indicates that firms have higher stock return at the time of an SEO than otherwise, i.e., the estimate of β_3 reported in Table 5 is .185. This is consistent with previous research (e.g., Teoh et al. (1998) report an average size and book-to-market adjusted return of 20% in the 12 months preceding an SEO) and may be explained by the fact that firms tend to have an SEO when stock price has risen (i.e., it is a different phenomenon than the announcement effect of an SEO). Our focus is not on this effect, which we control for but which plays no role in our hypotheses, but rather on whether the financial markets place a differential weight on earnings information reported at the time of an SEO.

References

- Aaker, David A. (1991), *Managing Brand Equity*. New York, N.Y.: The Free Press.
- Anderson, T.W., and Cheng Hsiao (1982), "Formulation and Estimation of Dynamic Models Using Panel Data." *Journal of Econometrics* 18 (1), 47-82.
- Ball, Ray, and Philip Brown (1968), "An Empirical Evaluation of Accounting Income Numbers." *Journal of Accounting Research* 6 (Autumn), 159-78.
- Barber, Brad M., and John D. Lyon (1997), "Detecting Long-Run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics." *Journal of Financial Economics* 43 (3), 341-72.
- Bayus, Barry L., Gary Erickson, and Robert Jacobson (2003), "The Financial Rewards of New Product Introductions in the Personal Computer Industry." *Management Science* 49 (2), 197-210.
- Bushee, Brian J. (1998), "The Influence of Institutional Investors on Myopic R&D Investment Behavior." *Accounting Review* 73 (3), 305-33.
- Chaney, Paul K., Timothy M. Devinney, and Russell S. Winer (1991), "The Impact of New Product Introductions on the Market Value of Firms." *Journal of Business* 64 (4), 573-610.
- Cheng, S. J. (2004), "R&D Expenditures and CEO Compensation." *Accounting Review* 79 (2), 305-28.
- Daniel, Kent, and Sheridan Titman (2004), "Market Reaction to Tangible and Intangible Information." Evanston, Ill.: Northwestern University, Working Paper.

- De Bondt, Werner F. M., and Richard Thaler (1985), "Does the Stock Market Overreact?" *Journal of Finance* 40 (3), 793-805.
- Dechow, Patricia, and Richard Sloan (1991), "Executive Incentives and the Horizon Problem: An Empirical Investigation." *Journal of Accounting and Economics* 14, 51-89.
- Dutta, Shantanu, Om Narasimhan, and Surendra Rajiv (1999), "Success in High-Technology Markets: Is Marketing Capability Critical?" *Marketing Science* 18 (4), 547-68.
- Eberhart, Allan C., William F. Maxwell, and Akhtar R. Siddique (2004) "An Examination of Long-Term Abnormal Stock Returns and Operating Performance Following R&D Increases." *Journal of Finance* 59 (2), 623-50.
- Fama, Eugene (1998), "Market Efficiency, Long-Term Returns, and Behavioral Finance." *Journal of Financial Economics* 49 (3), 283-306.
- Fama, Eugene F., and Kenneth R. French (1993), "Common Risk Factors in the Returns on Stocks and Bonds." *Journal of Financial Economics* 33 (1), 3-56.
- Fama, Eugene F., and Kenneth R. French (1996), "Multifactor Explanations of Asset Pricing Anomalies." *Journal of Finance* 51 (March), 55-84.
- Graham, John R., Campbell R. Harvey, and Shiva Rajgopal (2004), "The Economic Implications of Corporate Financial Reporting." Durham, N.C.: Duke University, Working paper.
- Hauser, John R., Duncan I. Simester, and Birger Wernerfelt (1994), "Customer Satisfaction Incentives." *Marketing Science* 13 (Autumn), 327-50.
- Hayes, Robert H., and William J. Abernathy (1980), "Managing Our Way to Economic Decline." *Harvard Business Review* 58 (July-August), 67-77.
- Healy, Paul M., and James M. Wahlen (1999), "A Review of the Earnings Management Literature and Its Implications for Standard Setting." *Accounting Horizons* 13 (December), 365-83.
- Kim, Minchung, Leigh McAlister, and Raji Srinivasan (2005), "Marketing and Systematic Risk of the Firm." Presented at 2005 Marketing Science Conferences, Emory University, June.
- Kormendi, Roger, and Robert Lipe (1987), "Earnings Innovations, Earnings Persistence, and Stock Return." *Journal of Business* 60 (3), 207-38.
- Kothari, S.P. (2001), "Capital Markets Research in Accounting." *Journal of Accounting and Economics* 31 (1-3), 105-231.
- Laverty, Kevin J. (1996), "Economic 'Short-Termism': The Debate, the Unresolved Issues, and the Implications for Management Practice and Research." *Academy of Management Review* 21 (3), 825-60.
- Lehmann, Donald R. (2004) "Metrics for Making Marketing Matter." *Journal of Marketing* 68 (4), 73-5.
- Lev, Baruch (1992), "Information Disclosure Strategy." *California Management Review* (Summer), 9-32.
- Levitt, Theodore (1960), "Marketing Myopia." *Harvard Business Review* (July-August), 45-56.
- Pauwels, Koen, Jorge Silva-Risso, Shuba Srinivasan, and Dominique M Hanssens (2004), "New Products, Sales Promotions, and Firm Value: The Case of the Automobile Industry." *Journal of Marketing* 68 (4), 142-56.
- Rangan, Srinivasan (1998), "Earnings Management and the Performance of Seasoned Equity Offerings." *Journal of Financial Economics* 50 (1), 101-22.
- Roychowdhury, Sugata (2003), "Management of Earnings Through the Manipulation of Real Activities That Affect Cash Flow from Operations." Cambridge, Mass.: MIT.
- Rust, Roland T., Tim Ambler, Gregory S. Carpenter, V. Kumar, and Rajendra K., Srivastava (2004), "Measuring Marketing Productivity: Current Knowledge and Future Directions." *Journal of Marketing* 68 (October), 76-89.
- Shivakumar, Lakshmanan (2000), "Do Firms Mislead Investors by Overstating Earnings before Seasoned Equity Offerings?" *Journal of Accounting and Economics* 29 (3), 339-71.
- Srivastava, Rajendra K., Tasadduq A. Shervani, and Liam Fahey (1998), "Market-Based Assets and Shareholder Value: A Framework for Analysis." *Journal of Marketing* 62 (January), 2-18.
- Stein, Jeremy C. (1989), "Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior." *Quarterly Journal of Economics* 104 (November), 655-69.
- Teoh, Siew, Ivo Welch, and T.J. Wong (1998), "Earnings Management and the Underperformance of Seasoned Equity Offerings." *Journal of Financial Economics* 50 (1), 63-99.

Report No. 06-100

"Myopic Marketing Management: The Phenomenon and Its Long-term Impact on Firm Value" © 2006 Natalie Mizik and Robert Jacobson; Report Summary © 2006 Marketing Science Institute