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Do Detail and Its Verifiability Serve as Indicators of Strategy Effectiveness and as Sources of Credibility in Voluntary Qualitative Disclosure?

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Abstract

This article examines whether detail and its verifiability serve as indicators of strategy effectiveness and provide sources of credibility in voluntary qualitative disclosure. In an archival study, utilizing a difference-in-difference research design, we find that firms that introduce customer retention strategy disclosures with verifiable detail are more effective at retaining customers than are firms that introduce disclosures with nonverifiable detail. In contrast, we find no significant difference between the performance of firms that initiate disclosures with verifiable detail and that of firms that initiate disclosures with no detail. In an experimental study, we find that customer retention strategy disclosures that include either verifiable or nonverifiable detail are perceived to be more credible than disclosures that provide no detail. In combination, we infer it is the verifiability of detail that predicts strategy effectiveness consistent with the disclosure, despite detail invoking perceived credibility in such disclosure.

Keywords

qualitative disclosure, credibility, verifiability, customer retention strategy

Disciplines

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Comments

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Keywords: qualitative disclosure, credibility, verifiability, customer retention strategy

JEL: M41, M49.

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Do Detail and Its Verifiability Serve as Indicators of Strategy Effectiveness and as Sources of Credibility in Voluntary Qualitative Disclosure?

Introduction

In this paper, we investigate whether detail and its verifiability serve as indicators of strategy effectiveness and as sources of credibility in voluntary qualitative disclosure. Disclosure provides users with information that can be used to assess firm value (Feltham & Ohlson, 1995; Freeman, 1987). Although firms are required to report financial information, voluntary qualitative disclosure can supplement mandatory reporting with information that helps users evaluate the unique economic conditions of a firm.[1] The accounting literature finds that managers make extensive use of qualitative disclosure (Baginski, Hassell, & Kimbrough, 2004; Hutton, Miller, & Skinner, 2003; Nichols, 2009). Furthermore, in 2003, the United States Securities and Exchange Commission (SEC) issued a press release calling for 10-K Management Discussion and Analysis (MD&A) that "is informative and transparent … to provide information about the quality of, and potential variability of, a company's earnings and cash flow" (SEC, 2003). Overall, prior research and the SEC's call for informative MD&A disclosures both suggest that qualitative disclosure represents an important medium for management communication.

However, there is a lack of research that simultaneously investigates which qualitative strategy disclosure characteristics reveal strategy effectiveness and whether such characteristics align with users' perceptions of credibility. One reason for this lack of research is that qualitative disclosures, unlike quantitative disclosures, are not often associated with a measurable outcome

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[1] In this paper, we focus exclusively on qualitative disclosure. Although we believe that quantitative non-financial disclosure can also signal strategy effectiveness through verifiable detail, in this paper, we focus on strategy disclosure rather than on operating measures or other non-financial metrics. We suggest that qualitative disclosure presents a more interesting setting to examine credibility via verifiable detail given the difficulty in assessing non-numeric ex post outcomes. Furthermore, the predictive value of operating metrics has been studied in prior literature (Cannon, Randall, Terwiesch, & Watanabe, 2017; Ittner, Larcker, & Meyer, 2003; Luft, 2009).

(Hirst, Koonce, & Venkataraman, 2008). Furthermore, qualitative disclosures are not typically verified ex post through formal accounting oversight processes (e.g., the audit). And yet, empirically, we observe an increasing number of qualitative disclosures with varying degrees of detail and verifiability (Baginski et al., 2004; Hutton et al., 2003; Nichols, 2009).

Theory predicts that managers will commit to a strategy of disclosing verifiable detail when they believe that the strategy is effective and will remain effective and when proprietary costs are low (Berger & Hann, 2007; Hughes & Williams, 2008). In contrast, when proprietary costs are high, managers will not provide detail, regardless of whether they believe the strategy is effective (Evans & Sridhar, 2002). However, managers who are unwilling to accept commitment costs through verifiability and who face low proprietary costs might provide non-verifiable detail disclosure to persuade users that their strategy is viable even when it is not viable. This leads us to question whether users perceive non-verifiable detail to be credible.

Mercer (2004, p. 186) defines disclosure credibility as "investors' perceptions of the believability of a particular disclosure," and states that one important aspect of this definition is that it "refers to a *perception* held by investors, not an objective condition of a disclosure." Experimental research shows that users perceive disclosure to be progressively more credible across three conditions: no detail, non-verifiable detail, and verifiable detail (Clarkson, Kao, & Richardson, 1994).[2] Consequently, we expect that users will perceive strategy disclosures containing verifiable detail to be more credible than disclosures containing non-verifiable detail, which will be perceived to be more credible than disclosures without detail.

[2] Much of the literature relies on verifiability to establish credibility (e.g., Hirst, Koonce, & Venkataraman, 2007; Hutton et al., 2003; Keung, 2010; Lansford, Lev, & Tucker, 2013; Merkley, Bamber, & Christensen, 2013). Psychology and legal research find that the provision of detail increases credibility through cognitive retrieval, salience, and an "unpacking effect" (Brody, Coulter, & Daneshfar, 2003; Tversky & Koehler, 1994; Van Boven & Epley, 2003).

Using both an archival study to establish whether qualitative disclosure indicates strategy effectiveness and an experimental study to measure perceptions of qualitative disclosure credibility allows us to compare actual ex post outcomes with ex ante perceptions. In the archival study, we hand-collect customer retention strategy disclosure data from firms' 10-Ks to examine whether changes in ex post firm performance, which we use as a proxy for strategy effectiveness, are associated with disclosure detail and its verifiability.[3] Specifically, we examine strategy effectiveness across customer retention strategy disclosures using the pre- to post-disclosure change in persistence of matched peer-adjusted Selling, General, and Administrative Margin (SGAM). In the experimental study, we examine whether detailed qualitative disclosures whose realizations can be verified are perceived as more credible than detailed disclosures whose realizations cannot be verified.[4]

First, we find that firms that switch from no disclosure to verifiable detail disclosure experience greater changes in abnormal SGAM persistence than do firms that switch from no disclosure to non-verifiable detail disclosure. Surprisingly, we find no significant difference in changes in abnormal SGAM persistence between firms that begin providing verifiable detail and firms that begin providing disclosure without detail. Furthermore, firms that move from nondisclosure to non-verifiable detail disclosure become *less* persistent in their abnormal SGAM than do firms that switch to no detail disclosure. Thus, we conclude that when a firm provides

[3] Our design is similar to that employed by McNichols (1989) and Rogers and Stocken (2005), in which an ex post outcome (management forecast error) proxies for ex ante information (managers' expectations at the time of the forecast).

[4] We define disclosure detail as the extent to which information is decomposed into smaller, more precise parts. For example, Parkway Properties mentions the following in its 2003 10-K filing: "[t]he primary drivers behind Parkway's revenues are occupancy, rental rates and customer retention." We define disclosure verifiability as the extent to which the information provided in the disclosure can be verified by an external party. For example, in its 2004 10-K, Apple, Inc. mentions the creation of the Apple Sales Consultant Program, which resulted in placing quality salespersons at reseller locations as a means of retaining customers. Such salespeople are observable, and thus verifiable, by a third party. We provide examples of 10-K disclosures that we classify as having detail, verifiable detail, or no detail in Appendix B.

detailed disclosure, the disclosure indicates strategy effectiveness only when the detail provided is *verifiable*. However, managers' withholding of detail may also be an indicator of a successful strategy (e.g., in a highly competitive environment). Interestingly, we find smaller changes in abnormal SGAM persistence in firms with non-verifiable detail disclosures than in firms with no detail disclosures. This final finding suggests that non-verifiable detail disclosure is a form of "cheap talk" (Farrell, 1987) rather than an indicator of strategy effectiveness.

In our experimental study, we find that disclosures providing verifiable detail or non-verifiable detail are perceived as more credible than disclosures that do not provide detail. However, we find no significant difference in credibility perceptions when we compare verifiable detail with non-verifiable detail. Our evidence suggests that users base their perceptions of credibility on the presence of detail rather than the verifiability of that detail, and thus, managers may convince users that a less effective strategy is viable by providing non-verifiable detail.

We contribute to the literature in several ways. By using both archival and experimental methods, we determine whether the information about strategy effectiveness conveyed by qualitative disclosures aligns with users' perceptions of the disclosures' credibility. Notably, we find that non-verifiable detail, although perceived to be more credible than no detail, is associated with less effective customer retention strategies than no detail disclosure. Thus, in setting expectations for future performance, we caution the investment community not to rely solely on the presence of detail rather than its verifiability, and not to necessarily discount disclosures without detail.

In addition, our findings add to the disclosure literature by improving our understanding of credibility in *qualitative disclosure*. Our results suggest that credibility through ex post verifiability is not limited to accounting measures reported in audited financial statements (e.g., Hirst, Jackson, Koonce, & Petroni, 2003; Hutton et al., 2003; Lundholm, 1999; Petroni, Ryan, & Wahlen, 2000; Ryan, 1997;). Specifically, detailed qualitative statements that relate to strategy can provide credibility and can also indicate strategy effectiveness when verifiable. Finally, by using both experimental and archival methods, we are able to study the interplay between real-world data and individual perceptions, leveraging the experimental advantage of strong internal validity and the archival advantage of strong external validity.

The remainder of the paper is organized as follows: in the next section, we motivate the importance of voluntary qualitative disclosure and the relevance of customer retention strategy as a disclosure topic. In the following sections, we develop hypotheses, present our archival and experimental research designs, and describe our empirical findings. The final section concludes.

Voluntary Qualitative Disclosure and Customer Retention Strategy

Voluntary Qualitative Disclosure

For markets to be efficient, corporations must disclose information about their performance and their prospects (Healy & Palepu, 2001). Mandatory disclosure and related financial reporting standards were instituted to provide "credible, transparent, and comparable financial information… to make sound investment and credit decisions" (FASB, 2009). Although these standards require that firms make certain types of disclosures, sufficient diversity exists between firms such that additional disclosure can inform investment decisions. *Voluntary* disclosure differs from *mandatory* disclosure in that it represents managers' willingness to convey private information even though it is not required (Dye, 2001).

The voluntary disclosure of *qualitative* information is widespread. Hutton et al. (2003) and Baginski et al. (2004) report that approximately half of the management forecasts sampled from 1993 through 1997 provide qualitative and open-ended forecasts, as opposed to point and range forecasts. Using data from 2002 through 2007, Nichols (2009) finds that the number of qualitative disclosures exceeds that of earnings guidance disclosures.

In more recent studies, Dhaliwal, Li, Tsang, and Yang (2011) and Dhaliwal, Radhakrishnan, Tsang, and Yang (2012) find that non-financial information contained in standalone corporate social responsibility (CSR) reports contributes to lower cost of capital and lower analyst forecast errors. Moreover, Merkley (2014) finds that market participants deem narrative disclosures of research and development (R&D) activities to be decision-useful. Finally, Beyer, Cohen, Lys, and Walther (2010) argue, "Analyzing… non-quantitative parts of corporate disclosure will likely provide us with a better understanding of management's disclosure choices and the resulting economics consequences." Thus, we expect the prevalence and strategic use of qualitative disclosure to provide insights into firm performance over time.

Despite the common use of voluntary qualitative disclosure, to our knowledge, few studies examine characteristics that establish *credibility* in qualitative disclosures, and even fewer studies examine disclosure characteristics associated with successful strategies.

Customer Retention Strategy

We focus on voluntary disclosures made about a firm's customer retention strategy. Customer retention strategy involves specific actions taken by a firm to encourage its customers to make repeat purchases. The relationship marketing literature provides extensive theoretical support for the idea that an effective customer retention strategy can lead to price and cost advantages. First, if customer retention strategy is effective, it will result in increased customer switching costs. These are the costs that customers incur if they choose to change suppliers, including the cost of information gathering and the risks associated with an unprecedented purchase experience (Hibbard, Kumar, & Stern, 2001; Morgan & Hunt, 1994, 1999). Competitors must provide incentives (i.e., price discounts) to compensate potential customers for their customer switching costs. Conversely, the firm need not compensate *retained* customers for switching costs because, by definition, they incur none. Thus, marketing theory suggests that an effective customer retention strategy results in a price premium over potential competitors.

Second, relationship marketing theory also contends that customer retention leads to lower per-customer transaction costs. Such transaction costs are typically categorized as selling, general, and administrative (SG&A) expense in a firm's financial statements. For example, a firm incurs marketing and promotion costs to make customers aware of its products and to create incentives to purchase them. Transaction cost investments are expected to become more efficient relative to those made by potential competitors as customer retention increases because firms can leverage knowledge and awareness gleaned from a long transaction history (Reichheld & Sasser, 1990; Srivastava, Shervani, & Fahey, 1998).[5] These transaction cost efficiencies provide an incumbent supplier with a cost advantage over potential competitors, and this leads to an increase in abnormal SG&A margin (net revenue less SG&A expense).

Thus, a firm's customer retention policy can have a great impact on both the firm's market position (i.e., price premiums) and costs. Yet, the implementation of customer retention policy is not always transparent to parties external to the firm, and therefore becomes a candidate topic for voluntary disclosure. For example, a firm may disclose that it is investing in customer retention by engaging in training its employees to foster customer relationships. Alternatively, a firm may disclose the use of data-analytical procedures (e.g., the procurement and analysis of customer

[5] Anecdotal evidence also suggests that customer retention is associated with lower customer transaction costs. For example, Pinnacle Entertainment, Inc. reports in their 2005 10-K, "We anticipate such [marketing and promotional] costs declining in the future. Generally, the cost to retain customers is less expensive than attracting new customers." The Allstate Corporation also reports in their 2003 10-K, "As is true for the industry in general, costs attributable to our personal property and casualty products are generally higher during the first year an insurance policy is in effect than in subsequent years… Policies become more profitable over time. Accordingly, customer retention is an important factor in the segments' profitability and a key element of our strategy in this business."

behavior patterns data). However, neither of these implementation details can be verified by parties external to the firm. In contrast, other disclosed strategy implementations may be easy to verify, such as the use of customer-interfacing sales consultants, customer loyalty programs, and/or customer service offerings. Because of this variation in verifiability, customer retention disclosures provide a fruitful area for examining how the inclusion of detail and its verifiability impact perceptions of the credibility of voluntary qualitative disclosures and whether the inclusion of verifiable detail indicates an effective strategy.

Hypotheses Development

Strategy Effectiveness

A strategy disclosure ex ante indicates a high degree of *strategy effectiveness* if, ex post, it is associated with positive performance. In choosing whether to provide detail and verifiability in disclosure, managers must weigh the expected costs of disclosure against the benefits of informing the capital market and deterring potential competitors (Healy & Palepu, 2001; Li, 2010). Signaling theory suggests that managers must consider two types of costs: commitment costs and proprietary costs (Berger & Hann, 2007).

First, managers' willingness to incur commitment costs by offering verifiable details is akin to offering a warranty on their strategy, thus strengthening the information content of the disclosure (Grossman, 1981). We expect that managers are more (less) willing to commit to a strategy when they expect it to be highly (minimally) effective. We illustrate managers' assessment of strategy effectiveness and their corresponding decision about whether to accept commitment costs associated with offering verifiable disclosure in the top portion of Figure 1.

[Insert Figure 1 about here]

Second, proprietary costs are inextricably tied to disclosure detail and the firm's competitive environment: the more detail the firm discloses, the more opportunity potential competitors have to formulate a counter-strategy (Evans & Sridhar, 2002; Hirst et al., 2003; Lundholm, 1999; Verrecchia, 1983, 2001;). Prior empirical work provides corroborating evidence that managers disclose less proprietary information as competition intensifies (Botosan & Stanford, 2005; Guo, Lev, & Zhou, 2004; Harris, 1998; Hayes & Lundholm, 1998; Jones, 2007).

Given the varying combinations of commitment and proprietary costs that managers face, we illustrate three possible disclosure detail and verifiability outcomes in the lower portion of Figure 1. First, we expect managers with low confidence in a strategy's effectiveness to be unwilling to accept commitment costs by offering verifiable details. The remaining alternatives of providing non-verifiable detail or no detail lead us to only expect managers to provide *non-verifiable detail* if proprietary costs are low (left side of Figure 1).[6]

Second, if proprietary costs are high due to intense competition, consistent with Wagenhofer's (1990) disclosure model and findings in Clarkson et al. (1994), we expect managers to provide disclosure containing *no detail* regardless of whether their strategies are more or less effective.[7] Therefore, a manager's choice to withhold disclosure detail provides an indicator of neither strategy effectiveness nor ineffectiveness (Figure 1 center).

Third, managers may be willing to provide implementation details regardless of competition intensity because they are confident the strategy will be effective. Moreover, a manager may use disclosure to deter prospective competitors (Darrough & Stoughton, 1990;

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[6] In the extreme, it is possible that managers provide non-verifiable detail without any intention of enacting strategy, to create a façade of activity that alleviates stakeholder pressure.

[7] Wagenhofer (1990) models a partial disclosure equilibrium when firms have 1) less favorable information to share and 2) favorable information that market opponents could take advantage of if it is revealed. Similarly, Feltham and Xie (1992) model a continuum of partial equilibria. In our setting, providing "no detail" customer retention strategy disclosure constitutes a partial disclosure – revealing a strategy without implementation details.

Hughes & Williams, 2008; Karuna, 2010; Spence, 1973).[8] Indeed, Cookson (2017), Goolsbee and Syverson (2008), and Molnar (2013) suggest that casinos and airlines disclose operational strategies to discourage entry. Thus, we expect managers who are confident in their strategy to include *verifiable detail* disclosure (Figure 1 right).

In summary, we expect disclosures that contain non-verifiable detail to indicate less effective strategies and disclosures that contain verifiable detail to indicate more effective strategies. However, we expect that disclosures providing no detail comprise a mix of more and less effective strategies. We formally state our first set of alternative hypotheses as follows:

Hypothesis 1a (H1a): Disclosures of customer retention strategy that include verifiable detail indicate more effective strategies than those that include no detail.

Hypothesis 1b (H1b): Disclosures of customer retention strategy that include no detail indicate more effective strategies than those that include non-verifiable detail.

Hypothesis 1c (H1c): Disclosures of customer retention strategy that include verifiable detail indicate more effective strategies than those that include non-verifiable detail.

Perceptions of Disclosure Credibility

Turning our attention to disclosure users, we rely on Mercer (2004, p. 186), who terms "investors' perceptions of the believability of a particular disclosure" as disclosure credibility. We refer to this as *perceived credibility.* Assuming users correctly perceive non-verifiable detail as "cheap talk" (i.e., an indicator of low strategy effectiveness), a rational manager has little incentive to provide such disclosure.[9] However, given the abundance of non-verifiable disclosure in firms'

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[8] Strategic deterrence could be accounted for as part of the prospective competitors' break-even function, as modeled by Feltham and Xie (1992) on page 52. The deterrence strength of the incumbent's customer retention strategy could increase the fixed cost of entry and/or decrease the contribution margin gained by entry, both of which would reduce the likelihood of competitive entry. Furthermore, detailed disclosure would be even more informative to market participants if the disclosure provides insights about prospective competitors' break-even point (see Feltham and Xie's Figure 2 on page 56). Said another way, firm managers benefit from detailed disclosure of a strong customer retention strategy both by deterring prospective competitors and by informing the market that competitors are unlikely to erode the financial benefits of the strategy. We thank an anonymous reviewer for bringing this point to our attention.
[9] We thank an anonymous reviewer for bringing this inference to our attention.

communications, some managers must believe that non-verifiable detail offers greater credibility about effective strategy than does no detail. In support, experimental research examining financial payout games finds an increasing progression of information credibility from no communication to cheap talk to verifiable detail (Clarkson et al., 1994). To reconcile managers' qualitative disclosure choices with users' belief in that disclosure, we next discuss detail and its verifiability from a disclosure user's perspective.

Detail. Disclosure detail is the extent to which information is broken down into smaller, more specific parts.[10] Detail has been linked to credibility across several different literatures. The accounting literature documents that in *financial* disclosure, disaggregated forecasts are perceived to be more credible than aggregated forecasts (Hirst et al., 2007; Hutton et al., 2003; Keung, 2010; Lansford et al., 2013; Merkley et al., 2013). The psychology literature also provides evidence that detail can impact credibility through the unpacking effect (Tversky & Koehler, 1994; Van Boven & Epley, 2003); with additional detail, individuals can more easily bring evidence to mind, and that evidence becomes more salient (Brody et al., 2003). The legal literature shows that juries find witnesses more credible when they provide more detail (Bell & Loftus, 1989; Wells & Leippe, 1981; Zaparniuk, Yuille, & Taylor, 1995). These studies suggest that greater detail increases credibility; whether these results generalize to a business setting in which the detail is qualitative rather than quantitative or oral is an empirical question.

Verifiability. We define verifiability in qualitative disclosure as the extent to which such detail can be corroborated by an external party. Specifically, the audience does not need to *actually* verify information to find the message credible; they just need to recognize that the information *can be*

[10] For example, a disclosure that states, "the Company maintains a customer retention program that involves analyzing purchase information and using that analysis to customize product offerings to our most profitable customers" contains more detail than a disclosure that merely states, "the Company maintains a customer retention program."

verified (Rosenthal, 1971).[11] Like detail, verifiability has been linked to credibility across several different literatures. The management forecast literature finds the market responds favorably to good news forecasts when such forecasts are accompanied by verifiable forward-looking statements, suggesting market participants view such statements as credible (Hirst et al., 2003; Hutton et al., 2003; Lundholm, 1999; Petroni et al., 2000; Ryan, 1997). In the speech literature, Rosenthal (1971) and Carbone (1975) argue that people will accept an empirical statement more readily when it contains verifiable and/or more unambiguous language. The advertising literature also provides evidence that verifiability affects credibility by investigating the difference between verifiable and non-verifiable product qualities (Nelson, 1970, 1974). Ford et al. (1990) finds that consumers are more skeptical of claims about non-verifiable attributes. This result is supported by more recent research that relies on these findings to study credibility in comparative advertising (Jain, Buchanan, & Maheswaran, 2000) and how source credibility differentially impacts the believability of verifiable and non-verifiable claims (Jain & Posavac, 2001).

Based on our discussion of users' response to disclosure detail, we conjecture that users perceive both verifiable detail and non-verifiable detail as more credible than no detail. Furthermore, based on our discussion of verifiability, we expect users to consider verifiable detail to be more credible than non-verifiable detail. This is consistent with Forsythe, Lundholm, and Rietz (1999), who study asset trading under conditions of quantitative anti-fraud disclosure, cheap talk, or no communication. We state our expectations about perceptions of credibility as follows:

[11] For example, the disclosure "the Company maintains a customer retention program that uses purchase information to make customized offerings to profitable customers by email, which they can print at kiosks in our stores" is verifiable, because an external party could go into one of the company's stores and examine one of the kiosks mentioned in the disclosure. In contrast, the disclosure "the Company maintains a customer retention program that involves analyzing purchase information and using that analysis to customize product offerings to our most profitable customers" is not easily verifiable by external parties, unless a party is one of the company's most profitable customers and can discern whether their offered product is more customized than those offered to other customers. We note that almost all details could be verified under extreme conditions, such as when the company is subject to litigation. However, we expect such cases involve cost to users and thus are less likely to be invoked.

Hypothesis 2a (H2a): Disclosures of customer retention strategy that include verifiable detail are perceived as more credible than such disclosures that include no detail.

Hypothesis 2b (H2b): Disclosures of customer retention strategy that include non-verifiable detail are perceived as more credible than such disclosures that include no detail.

Hypothesis 2c (H2c): Disclosures of customer retention strategy that include verifiable detail are perceived as more credible than such disclosures that include non-verifiable detail.

Research Designs

To test H1, we examine whether combinations of detail and verifiability in actual 10-K customer retention strategy disclosures are associated with strategy effectiveness, captured by persistence of operating performance. We acknowledge that it is unusual to use persistence of *ex post* performance information as a proxy for *ex ante* expectations derived from disclosure (such as strategy effectiveness), but we suggest that variation in ex post performance is a theory-consistent proxy for strategy effectiveness which has construct validity advantages over contemporary measures that combine both reactions to expected strategy effectiveness and disclosure credibility (e.g., stock price reactions). Unlike other research questions in which an ex post measure might induce endogeneity concerns, we have little reason to believe that managers' mere disclosure of customer retention strategy would simultaneously increase its effectiveness.[12]

However, as we point out in the previous section, a manager's incentive to disclose depends on whether users will perceive it to be credible. Thus, to reconcile disclosure users' credibility perceptions with strategy effectiveness associated with disclosure detail and its verifiability, we test H2 by conducting a laboratory experiment in which we have participants judge the credibility

[12] One exception might be that managers choose to provide verifiable detail because they expect the disclosure to enhance the effectiveness of their strategy by deterring competitive entry (Darrough & Stoughton 1990). In this case, the disclosure itself is part of the customer retention strategy, and thus indicative of the managers' assessment of their strategy's effectiveness (our construct of interest, see Figure 1).

of various customer retention disclosures.

Archival Study Research Design

Model specification. We operationalize the persistence of operating performance with the persistence of peer-adjusted SG&A Margin, which we term abnormal SGAM.[13] Specifically, we first match each firm that initiates a 10-K customer retention strategy disclosure in year *t* with a firm that does not provide such disclosure in all years' *t*–3 through *t*+3, based on industry, size, and pre-disclosure performance (see online Appendix A). We use this design in lieu of industry-adjusted performance because it allows us to observe post-disclosure divergence between the disclosing firm's performance and that of its most similar-performing non-disclosing competitor. To illustrate, a large firm may have an abnormally large proportion of industry profits due its size, even when its SGAM falls below the industry mean. Matching on size resolves this issue. Similarly, within an industry, substantial diversity may exist in the proportion of SG&A expense relative to other expenses, resulting in misleading interpretations of industry-adjusted SGAM. Matching on pre-disclosure SGAM performance mitigates this problem. Furthermore, matching on pre-disclosure SGAM ensures that the matched firms are performing similarly prior to the disclosure year, reducing the likelihood that post-disclosure performance improvements are attributed to non-disclosure-related economic factors (e.g., reversion to mean). Finally, matching by industry-year controls for temporal effects on SGAM (assumed to be constant across similarly-sized firms within an industry).

[13] As discussed in the second section, we expect customer retention to be associated with abnormal SGAM due to price premiums related to increased customer switching costs and lower SG&A expenses due to lower customer transaction costs (Hibbard et al., 2001; Morgan & Hunt, 1994, 1999; Reichheld & Sasser, 1990; Srivastava et al., 1998). Alternatively, we could use gross margin (1 – cost of goods sold scaled by net revenue) as a performance measure. However, although gross margin captures price premiums derived from increased switching costs, it does not account for any lower transaction cost efficiencies derived from ongoing customer relationships. In an untabulated analysis, using gross margin, we find support for *H1a*: Verifiable Detail > No Detail (p = 0.047), but no support for *H1b*: No Detail > Non-verifiable Detail or *H1c*: Verifiable Detail > Non-verifiable Detail.

Second, we create our abnormal SGAM measure by subtracting the matched firm's SGAM from that of the disclosing firm. To examine differences in abnormal SGAM persistence across firms with different disclosure types, we follow Harris (1998) and employ the following model:

$$\begin{aligned}SGAM_t = {} & \varphi_{1,i}NEG_{i,t-1} + \varphi_{2,i}POS_{i,t-1} + \varphi_3 NEG_{i,t-1}\times SGAM_{i,t-1} + \varphi_4 POS_{i,t-1}\times SGAM_{i,t-1} \\ & + \varphi_5 DISC_{i,t-1}\times NEG_{i,t-1} + \varphi_6 DISC_{i,t-1}\times POS_{i,t-1} + \varphi_7 DISC_{i,t-1}\times NEG_{i,t-1}\times SGAM_{i,t-1} \\ & + \varphi_8 DISC_{i,t-1}\times POS_{i,t-1}\times SGAM_{i,t-1} + \varphi_9 Mktshr_{i,t-1} + \varphi_{10} Herf_{i,t-1} + \varepsilon_{i,t}, \qquad (1)\end{aligned}$$

where $SGAM_t$ is abnormal SGAM for the period ending at time t. We measure SGAM using SG&A Margin (1 – SG&A expenses scaled by net revenue). NEG_t (POS_t) are indicator variables equal to 1 when $SGAM_t$ is greater than or equal to (less than) zero, and equal to 0 otherwise. We separate $SGAM_t$ into positive and negative components because marketing theory suggests that customer retention cost advantages increase the persistence of positive abnormal SGAM, but not the persistence of negative abnormal SGAM (Hibbard et al., 2001; Morgan & Hunt, 1994, 1999; Reichheld & Sasser, 1990; Srivastava et al., 1998). $DISC_{i,t}$ is equal to 0 for all periods through the disclosure year and equal to 1 for subsequent periods. The coefficients ϕ_3 and ϕ_4 capture negative and positive abnormal SGAM persistence prior to disclosure and are expected to be between 0 and 1 (Harris, 1998). The coefficients (ϕ_1 and ϕ_2) on the indicator variables allow the pre-disclosure period negative and positive abnormal SGAM intercepts to vary, whereas the coefficients (φ_5 and φ_6) on their interactions with the disclosure indicator variable ($DISC_{i,t}$) allow the negative and positive abnormal SGAM intercepts to vary subsequent to disclosure. The pre-/post-disclosure model accounts for firm-specific factors that might differentiate managers' choice to disclose customer retention strategy using a combination (or lack) of detail and verifiability. Specifically, we examine performance before and after a new customer retention disclosure.[14]

[14] It is possible that the firm's disclosed customer retention strategy was initiated sometime prior to the disclosure or

Finally, the coefficients (φ_7 and φ_8) on the interactions, $NEG_{i,t} \times SGAM_{i,t}$ and $POS_{i,t} \times SGAM_{i,t}$, and the disclosure indicator variable, $DISC_{i,t}$, estimate the change in persistence subsequent to the disclosure year. We do not expect the persistence of negative abnormal SGAM to change because a firm does not have an incentive to pursue a loss opportunity ($\varphi_7 = 0$). In contrast, we expect an effective customer retention strategy to increase the persistence of positive abnormal SGAM ($\varphi_8 > 0$). H1 compares the change in persistence of abnormal SGAM for firms that provide verifiable detail, non-verifiable detail, and no detail ($\varphi_{8,Verifiable\ Detail} > \varphi_{8,No\ Detail}$, $\varphi_{8,No\ Detail} > \varphi_{8,Non\text{-}Verifiable\ Detail}$, $\varphi_{8,Verifiable\ Detail} > \varphi_{8,Non\text{-}Verifiable\ Detail}$).[15]

We include two control variables to account for competitive environment factors that influence disclosure detail choice: market share and industry concentration. We use market share ($Mktshr_{i,t-1}$) as a proxy for a disclosing firm's ability to avoid competitive retaliation based on its existing market power. We expect that firms with greater market power are more likely to disclose strategy details than firms with lesser market power. Industry concentration ($Herf_{i,t-1}$) is a proxy for the threat of competitive retaliation that disclosing firms face when making disclosure detail decisions. We propose that firms with lower industry concentration (greater rivalry) are less likely to disclose strategy details than firms with greater industry concentration.

Because we use panel data, we calculate the parameter estimates using the Prais-Winsten (1954) generalized least squares estimator to correct for panel-specific auto-regression (Vogelsang, 1998). We also include firm indicator variables to account for firm fixed effects (Petersen, 2009).

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that the strategy had not yet been initiated at the time of the disclosure. Furthermore, it is possible that the firm used other communication channels to disclose the strategy. Each of these possibilities would bias our empirical analysis against finding results that support our hypotheses.

[15] We test the hypotheses using a stacked regression that combines sub-samples, using verifiable detail indicator variable interactions to identify differences between the sub-samples. For exposition, the sub-sample regressions are reported separately.

Sample Selection. Table 1 describes the sample selection process. The sample initially includes all firms with available data in Compustat from 1998 through 2006. The sample period begins in 1998 because few firms (if any) made voluntary disclosures about customer retention strategy from 1994 (when online 10-K filings became available) through 1997. Due to potentially confounding effects of regulation on customer retention strategy and performance, we exclude firms from regulated industries (NAICS 2211-2213, 5131-5133, 5151-5152, 5171-5179). Furthermore, we expect that customer relationships in firms which compete in the utilities and telecommunications industries may be associated with technological advantages and/or other long-term capital-intensive barriers to entry (e.g., Tam & Tummala, 2001). Given that we utilize a short-window within-firm change model that might not capture the full economic effects of such customer-related competitive advantages, we exclude these firms from our analyses.

[Insert Table 1 about here]

We identify 10-K customer retention strategy disclosures by searching filings for three distinct word strings: "customer retention," "retain customer," and "relationship marketing." A co-author read the text surrounding these word strings to determine whether the disclosure references customer retention strategy. Next, the co-author examined whether the same firms experienced any contemporaneous significant economic events *not* explicitly related to customer retention strategy that might provide an alternative explanation for differences in operating performance. All observations with these events within a two-year window around the firm's disclosure are omitted. If these events fell three to four years prior or subsequent to disclosure, we only drop the observations outside of the two-year window around the disclosure. Of the 116 firms identified as disclosing customer retention strategy, we exclude 20 firms due to confounding economic events.[16]

[16] Our research design compensates for potential lack of power due to the relatively small sample size by controlling

Details regarding the dropped observations are included in online supplement Table 1S. A selection of excerpts from disclosures and justification for coding from each sub-sample is included in online Appendix B. The abnormal SGAM variable is winsorized at the top and bottom 1% level to avoid outliers.

Several firms issued multiple disclosures that included a word string during the sample period. In these cases, the first chronological occurrence is classified as the disclosure year, so that each firm has a pre-disclosure baseline free of customer retention strategy disclosures. A detailed breakdown of industry and disclosure year timing is available in online supplement Table 2S.

Finally, we classify each firm that disclosed customer retention strategy according to whether it provides verifiable detail (see online Appendix C for coding details). Specifically, a disclosure is considered to have verifiable detail if it contains statements that describe the nature of the strategy, and the strategy's implementation could be verified by a constituent external to the firm (e.g., customer, investor, competitor). For example, a disclosure that states, "the Company is currently beginning the chain-wide rollout of its new relationship marketing program, the ExtraCare Card" provides sufficient detail that can be verified by observing the physical existence of the card. This example would be coded as Verifiable Detail. In contrast, a disclosure that states "the Company believes the implementation of the customer tracking system will help us retain customers" provides detail regarding the firm's strategy. However, entities external to the firm cannot verify the existence of the customer tracking database. This example would be coded as

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for: 1) systematic cross-sectional factors that might impact both the manager's choice to change their disclosure and subsequent economic performance (industry peer-adjusted dependent variable), 2) intertemporal factors that might differentiate disclosing firms from non-disclosing firms (i.e., difference-in-difference design), and 3) time-clustered events that might motivate our sample firms to make a customer retention disclosure (staggered disclosure dates). As such, any remaining confounding construct would necessarily be both correlated with the level of verifiable detail provided by firms that disclose customer retention strategy and differences in the changes in the disclosing firm's persistence of positive performance relative to a non-disclosing similarly-sized and -performing industry peer.

Non-Verifiable Detail. Finally, a disclosure that states "the Company continues emphasis on customer retention" does not provide a sufficient description of the strategy implementation to be considered detailed. This example would be coded as No Detail.[17] Each excerpt was classified independently by two coders. Any coding discrepancies were reconciled by a non-coding co-author. The final sample consists of 96 firms (39 provide verifiable detail, 18 provide non-verifiable detail, and 39 do not provide detail).

Experimental Study Research Design

To test H2, we conducted a between-subjects experiment in which participants played the role of financial analysts. Participants read a job description indicating that they were responsible for analyzing company information and making investment recommendations. Participants then read a customer retention disclosure and answered questions about their perceptions of the disclosure. Finally, participants answered manipulation check, follow-up, and demographic questions.

Independent variables. The level of detail and verifiability in the customer retention disclosure (*Detail/Verifiability*) was manipulated between subjects; thus, each subject saw a Verifiable Detail, Non-Verifiable Detail, or No Detail disclosure, patterned after those disclosures identified in 10-K filings. We manipulate *Detail/Verifiability* at these three levels to enable us to isolate the influence of verifiability from the presence of detail on credibility perceptions. Specific wording for these three levels of *Detail/Verifiability* are reported in online Appendix D.

Disclosures containing more detail are naturally longer than disclosures containing less detail, and disclosures containing verifiable detail tend to be longer than disclosures containing non-verifiable detail. To isolate the effect of *Detail/Verifiability* from the effect of the length of the disclosure, we also manipulated *Length* by including two versions of the disclosure at each

[17] Examples are based on the 2000 10-K for CVS Caremark Corporation; 2004 10-K for Suburban Propane Partners, L.P.; and 2003 10-K for Rollins, Inc. Wording is slightly adapted for illustration.

level of *Detail/Verifiability*: in the Short condition, disclosures contained 21–39 words, and in the Long condition, disclosures contained 67 words.[18]

Dependent variables. After reading the disclosure, participants answered three questions regarding its credibility, which we use as measures of our dependent variable (*Credibility)* in our analysis. *Credibility to Self* is measured by participants' response to the question "How believable is the disclosure to you as an investor?"[19] Similarly, *Credibility to Others* [*Competitors*] is measured by participants' response to the question "How believable would the disclosure be to other investors [the company's competitors]?" Participants responded to each question on a scale ranging from zero (not believable) to ten (very believable). A factor analysis on the three measures of credibility revealed a single factor which explained 72.5% of the variance. We use the factor score for each observation with respect to this factor as our measure of *Credibility*.[20]

Participant characteristics. A total of 208 business students, both graduate and undergraduate, from a large Midwestern university completed the experiment.[21] Consistent with Elliott, Hodge, Kennedy, and Pronk (2007), our participants are representative of the population of interest, potential investors, because the task required only a basic understanding of disclosures and how they relate to company value. On average, participants had completed 3.2 semesters of accounting courses with an average GPA of 3.53, 1.6 semesters of finance courses with an average GPA of 3.52, and 2.2 semesters of economics courses with an average GPA of 3.54. On average,

[18] Longer versions of the Non-Verifiable Detail and No Detail disclosures were created by adding non-substantive verbiage to the shorter versions, whereas the shorter version of the Verifiable Detail disclosure was created by removing as much extra verbiage from the longer version as possible.

[19] We used the term "believable" rather than "credible" as it directly relates to Mercer's definition of disclosure credibility as "investors' perceptions of the believability of a particular disclosure" (Mercer, 2004, p. 186). In an earlier version of the experimental instrument, we used the term "credible," and the pattern of results was similar to that found here.

[20] Results are similar to those of the main analysis when each of the three *Credibility* variables are used as the dependent variable.

[21] Including graduate status in the model does not affect results. Results are similar to those from the main analysis when using only graduate students or only undergraduate students.

participants had 2.6 years of work experience. The average age of the participants was 25, 38 percent were graduate students, 53.4 percent were either accounting or finance majors, and 55 percent were female. Participants received extra credit in the courses from which they were recruited for their participation.

Manipulation checks. As a manipulation check for Detail, we asked participants to what extent they believed the disclosures they evaluated contained detail about customer retention strategy. As reported in Table 2, the mean response was significantly lower in the No Detail condition than in both the Non-Verifiable Detail and the Verifiable Detail conditions ($p < 0.001$ for both comparisons), but the difference between the Non-Verifiable Detail and Verifiable Detail conditions was not significant ($p = 0.964$), consistent with our manipulation.

[Insert Table 2 about here]

In a similar manipulation check for *Verifiability*, the mean response to a question about whether the disclosure could be verified by someone outside the firm was significantly lower for the No Detail than for the Verifiable Detail condition ($p < 0.001$), lower for Non-Verifiable Detail than for Verifiable Detail, ($p = 0.052$), and lower for No Detail than for Non-Verifiable Detail ($p = 0.064$). The p-value for the comparison between Non-Verifiable Detail and Verifiable Detail, which we expect to be significant, is just outside the 95% confidence level. Interestingly, although the p-value of the comparison between No Detail and Non-Verifiable Detail is outside the 95% confidence level, it is significant at the 10% level. This indicates that at least directionally, participants rated disclosures containing non-verifiable detail as more verifiable than disclosures containing no detail, even though neither of the disclosures were verifiable. The important outcome for purposes of our manipulation, however, is that verifiability is rated higher in the Verifiable Detail condition than in either condition in which the disclosures were not verifiable.

As a manipulation check for *Length*, we asked participants to what extent they believed the disclosure they evaluated was long. See Table 2 for marginal means. There were no significant differences across any conditions, and the mean in all conditions was low, indicating that participants did not view any of the disclosures as very long. To check that the *Length* manipulation did not affect perceptions of information content, we asked participants to what extent they believed the disclosure was informative. The difference in *Informativeness* between Short and Long overall was insignificant across all conditions (p = 0.364), and within each *Detail/Verifiability* condition (p = 0.998, 0.986, and 0.996 for No Detail, Non-Verifiable Detail, and Verifiable Detail, respectively). However, the marginal mean for *Informativeness* in the No Detail condition was significantly different from that for both Non-Verifiable Detail and Verifiable Detail ($p < 0.001$ and $p = 0.001$, respectively). This indicates that although *Length* did not affect participants' perception of information content, *Detail/Verifiability* did—participants viewed disclosures containing more detail as more informative, which is unsurprising because providing more detail necessitates providing more information. Note that this outcome does not affect our main conclusions, which relate to credibility rather than informativeness.

Empirical Findings

Strategy Effectiveness Findings

Descriptive statistics. Table 3, Panel A provides descriptive statistics for SGAM. Standard deviations for the Verifiable and Non-Verifiable Detail sub-samples are lower than standard deviations for the No Detail sub-sample. This suggests that firms providing detailed disclosures have less variation in their peer-adjusted performance than firms that do not, consistent with greater willingness to accept commitment costs or lesser competition.

[Insert Table 3 about here]

Table 3, Panel B provides abnormal performance descriptive statistics for each year from four years prior through four years subsequent to the disclosure year. We observe a systematic difference in the magnitude of changes in SGAM between Verifiable Detail and Non-Verifiable Detail firms from pre- to post-disclosure years. Specifically, the magnitude of SGAM generally increases in Verifiable Detail firms and decreases in Non-Verifiable Detail firms, suggesting that the former firms have a more effective customer retention strategy than the latter firms.

Tests of Hypotheses 1a, 1b, and 1c. In Table 4, columns I, II, and III report results for the Verifiable Detail, No Detail, and Non-Verifiable Detail sub-samples respectively. Parameter φ_8 estimates capture the change in persistence of positive abnormal SGAM subsequent to disclosure. We test our hypotheses by comparing the magnitude of φ_8 for each combination of disclosure condition sub-samples, and present those tests at the bottom of Table 4.

[Insert Table 4 about here]

The empirical evidence reveals both an increase in the persistence of positive abnormal SGAM for Verifiable Detail ($\varphi_{8,\mathit{Verifiable\ Detail}} = 0.329$, $p < 0.01$) and No Detail ($\varphi_{8,\mathit{No\ Detail}} = 0.292$, $p < 0.001$) sub-samples, and that the difference between the parameter estimates does not differ from zero ($p = 0.379$). This empirical result does not support *H1a* – that disclosures with verifiable detail indicate a more effective strategy than do disclosures with no detail. However, in untabulated analyses, we find a significant difference in the standard deviation of abnormal performance (SGAM) between the Verifiable Detail and No Detail samples. Specifically, the No Detail sample has a standard deviation of 0.206 in the post-disclosure period, more than double that of the Verifiable Detail sample, at 0.075. The difference in variances between the two samples is highly significant (Levene's T-statistic = 9.70, $p = 0.002$), and is consistent with our expectation that the omission of detail in customer retention disclosure signals *either* high *or* low strategy effectiveness (see Figure 1), whereas the inclusion of verifiable detail is *only* likely to signal high strategy effectiveness. That is, the combination of finding no difference in mean ex post strategy effectiveness and a highly significant difference in standard deviation suggests that No Detail firms have a wider distribution of strategy effectiveness around a similar average level relative to Verifiable Detail firms.

Next, we document a decrease in persistence of positive abnormal SGAM for the Non-Verifiable Detail sub-sample ($\varphi_{8,\textit{Non-Verifiable Detail}} = -0.272$, $p < 0.10$). Both the No Detail and Verifiable Detail parameter estimates are significantly greater than the Non-Verifiable Detail parameter estimate ($p < 0.001$, $p < 0.01$, respectively). These empirical results support *H1b* and *H1c* – that disclosures with no detail and verifiable detail suggest a more effective strategy than disclosures with non-verifiable detail. In combination, our archival results suggest that verifiability is a valid gauge of strategy effectiveness among firms that introduce detail in their disclosure. However, the lack of support for *H1a* suggests that offering No Detail strategy disclosures may reflect managers' attempts to withhold proprietary information from the competitive market about an effective strategy.[22]

The parameter estimates on the competitive environment control variables are inconsistent with expectations. Both competitive environment parameter estimates (φ_9) and (φ_{10}) on our proxies for market power ($Mktshr_{i,t-1}$) and rivalry ($Herf_{i,t-1}$) do not significantly differ from zero for the Verifiable Detail sub-sample, but are negative ($p < 0.05$ and $p < 0.10$) for the No Detail and Non-Verifiable Detail sub-samples. However, untabulated results reveal no significant differences in

[22] In an untabulated analysis, we substitute the magnitude of abnormal SGAM for abnormal SGAM persistence. We find results that parallel those using abnormal SGAM persistence, reported in Table 4. Specifically, we find that those firms that include non-verifiable detail in their customer retention strategy disclosures report a decline in abnormal SGAM whereas firms that include verifiable detail or no detail in their disclosures maintain abnormal SGAM. This pattern is consistent with our inferences regarding customer retention strategy effectiveness.

coefficients (φ_9, φ_{10}) across sub-samples. These results suggest that whether a disclosed customer retention strategy is susceptible to competitive retaliation depends on the strategy itself, rather than on the disclosing firm's market power or the degree of industry rivalry.

Perceived Credibility Findings

Recall that our findings thus far demonstrate that managers who offer verifiable detail or no detail disclosure convey greater strategy effectiveness than do managers who offer non-verifiable detail disclosure. In fact, the negative Non-Verifiable Detail firms' parameter estimate ($\varphi_{8,\textit{Non-Verifiable Detail}}$ = –0.272, $p < 0.10$) suggests that non-verifiable detail disclosure is associated with deteriorating performance. Next, using an experiment, we assess whether the perceived credibility of disclosure can explain why managers would provide non-verifiable customer retention strategy detail given its relatively poor association with strategy effectiveness.

Hypotheses 2a, 2b, and 2c. Table 5, Panel A presents the least-square means for all three measures of *Credibility* for each *Detail/Verifiability* condition. Means for each measure of *Credibility* in the Verifiable Detail and Non-Verifiable Detail conditions are significantly greater than the midpoint of the scale (5.00) when tested at a 95% confidence level, whereas means for all measures of *Credibility* in the No Detail condition are not statistically different from the midpoint of the scale.

[Insert Table 5 about here]

Panel B presents the results of an ANOVA in which *Credibility* is the dependent variable and *Detail/Verifiability* and *Length* are the independent variables. The main effect of *Detail/Verifiability* is significant ($F = 12.27$, $p < 0.001$), the main effect of *Length* is insignificant ($F = 0.00$, $p = 0.970$), and the interaction between *Detail/Verifiability* and *Length* is also insignificant ($F = 0.39$, $p = 0.674$).

To test Hypotheses *2a*, *2b*, and 2*c*, we conduct follow-up tests. Specifically, we compare the means of the Verifiable Detail, Non-Verifiable Detail, and No Detail conditions of the *Detail/Verifiability* variable using Tukey-Kramer-adjusted comparisons (Panel C). Results indicate that *Credibility* is higher in the Verifiable Detail condition than in the No Detail condition ($t = 3.411$, $p = 0.002$), supporting *H2a*. Results also indicate that *Credibility* is higher in the Non-Verifiable Detail condition than in the No Detail condition ($t = 4.802$, $p < 0.001$), supporting *H2b*. However, results do not support *H2c* because *Credibility* is not significantly different across the Verifiable Detail and Non-Verifiable Detail conditions ($t = 1.386$, $p = 0.350$).

In sum, despite non-verifiable detail disclosures indicating a less effective strategy (whether compared with no detail or verifiable detail disclosures), users *perceive* non-verifiable detail as more credible than no detail, and no less credible than verifiable detail. These findings offer a plausible explanation for why managers would provide customer retention strategy disclosure with non-verifiable details.

Robustness Checks and Additional Analyses

Alternative event windows. In our archival analyses, we impose a seven-year minimum requirement for each firm to be included in the samples, and we limit the pre- and post-disclosure periods to four years. As a robustness test, we vary the pre- and post-disclosure time horizons to provide adequate time to capture post-disclosure performance trends, to mitigate concerns about survivorship bias, and to accommodate variation in how long cost advantages persist. First, we increase the post-disclosure period to six years [–4/+6 window] to capture performance effects that take longer to materialize. Second, we reduce the pre- and post-disclosure periods to exactly two years [–2/+2 window] to isolate immediate pre- and post-disclosure performance. Additionally, this limited sample period eliminates any incremental weight placed on firms that have a full complement of firm-year observations relative to those that do not.

Our results are statistically similar to the primary results with one exception. Using the –2/+2 window sample, we find the increase in persistence of positive abnormal SGAM is greater for the No Detail sample than for the Verifiable Detail sample ($p < 0.05$, one-sided). These results suggest that customer retention strategies disclosed with verifiable detail may take longer to yield performance results than do customer retention strategies disclosed with no detail. However, the robustness check results still support the conclusion that *verifiability* is a valid indicator of strategy effectiveness among firms that provide detail.

Post-experimental question additional analyses. Analysis of the follow-up questions indicates that participants believe the disclosures were important (mean = 1.475) and realistic (mean = 1.473), the task was easy to understand (mean = 2.179), and that they put a lot of effort into the task (mean = 0.410).[23] Participants disagreed that they had a great deal of experience with financial analysis (mean = –0.836), customer retention disclosure (mean = –0.942), and non-financial disclosure (mean = –0.831). All means were significantly different from 0, the midpoint of the scale.

We also found that subjects in the No Detail condition rated the disclosures as both less important than did subjects in the Non-Verifiable Detail condition ($t = 3.410$, $p = 0.002$) and less realistic than did subjects in the Non-Verifiable Detail condition ($t = 4.582$, $p < 0.001$) or the Verifiable Detail condition ($t = 3.446$, $p = 0.002$). When importance and realism are included as variables in the main analysis, the relation between each variable and *Detail/Verifiability* is highly significant ($p < 0.001$) and the explanatory power of the model increases.

Next, we conduct a mediation analysis which includes both importance and realism as mediating variables (Hayes 2017). The direct effect of *Detail/Verifiability* on *Credibility* (total effect size = 0.26, 95% confidence interval ranges from 0.11 to 0.41) remains marginally

[23] The response scale for all questions ranged from –5 (Strongly Disagree) to +5 (Strongly Agree).

significant (effect size = 0.12, 95% confidence interval ranges from –0.01 to 0.25) and accounts for 47% of the total effect. Realism serves as an important mediator (effect size = 0.11, 95% confidence interval ranges from 0.04 to 0.19), accounting for 42% of the total effect. When included together with realism, importance does not emerge as an important mediator (effect size = 0.00, 95% confidence interval ranges from –0.03 to 0.03), accounting for only 0.5% of the total effect. However, the effect of realism through importance is statistically significant, although small (effect size = 0.03, 95% confidence interval ranges from 0.01 to 0.06), accounting for 10% of the total effect.

We interpret these empirical results to mean that the effect of *Detail/Verifiability* on *Credibility* is stronger the more realistic a participant views a disclosure to be. Furthermore, a small part of this mediation occurs because the realism of the disclosure affects the participant's perception of the disclosure's importance, although on its own, importance does not affect the relation between *Detail/Verifiability* and *Credibility.*[24]

Conclusion

This paper examines whether detail and its verifiability serve as indicators of strategy effectiveness and sources of credibility in qualitative customer retention strategy disclosures. Specifically, we find in our archival analyses that *verifiability* is the key to discerning whether disclosure detail indicates strategy effectiveness—disclosures that provide verifiable detail are more indicative of strategy effectiveness than disclosures that provide non-verifiable detail. Importantly, we also observe greater strategy effectiveness associated with no detail than with non-verifiable detail disclosure. In contrast, we find in our experimental analyses that *detail* is the key to perceptions

[24] Baron and Kenny (1986) analysis yields similar results: the direct effect of *Detail/Verifiability* on *Credibility* is marginally significant including both mediators (t = 1.82, p = 0.07). A Sobel test indicates that the indirect effect of *Realism* is significant (t = 2.984, p = 0.003) and the indirect effect of *Importance* is insignificant (t = 1.533, p = 0.125).

of credibility—both customer retention strategy disclosures providing verifiable detail and those providing non-verifiable detail are perceived as more credible than disclosures that provide no detail. Thus, we demonstrate that although providing details alone increases perceptions of a disclosure's credibility, it does not reliably indicate an effective customer retention strategy.

This study has several limitations. First, it uses a single disclosure setting to evaluate detail and its verifiability as indicators of strategy effectiveness and sources of credibility, possibly limiting generalizability. The usefulness and availability of verifiable detail may vary substantially across qualitative disclosure settings. For example, firms may disclose employee retention programs that result in a cost advantage (potential competitors must incur employee development costs to enter a market). However, disclosed implementation details may be more difficult to verify than those relating to customer retention programs. Furthermore, we recognize that our use of SG&A margin as a measure of performance is specific to customer retention strategy effectiveness. We invite future research to investigate other types of qualitative strategy disclosure by taking advantage of alternative research methods (e.g., firm surveys, field studies), and to expand the scope of performance that might be indicated by qualitative disclosure through use of a wide array of performance measures.

Finally, we note that our findings illustrate a disconnect between disclosure users' perceptions and actual future operational performance. Given this apparent disconnect, we invite future research to investigate how market participants (e.g., financial analysts, investors, creditors) weigh the informative value of qualitative disclosures' detail (or lack thereof) and its verifiability.

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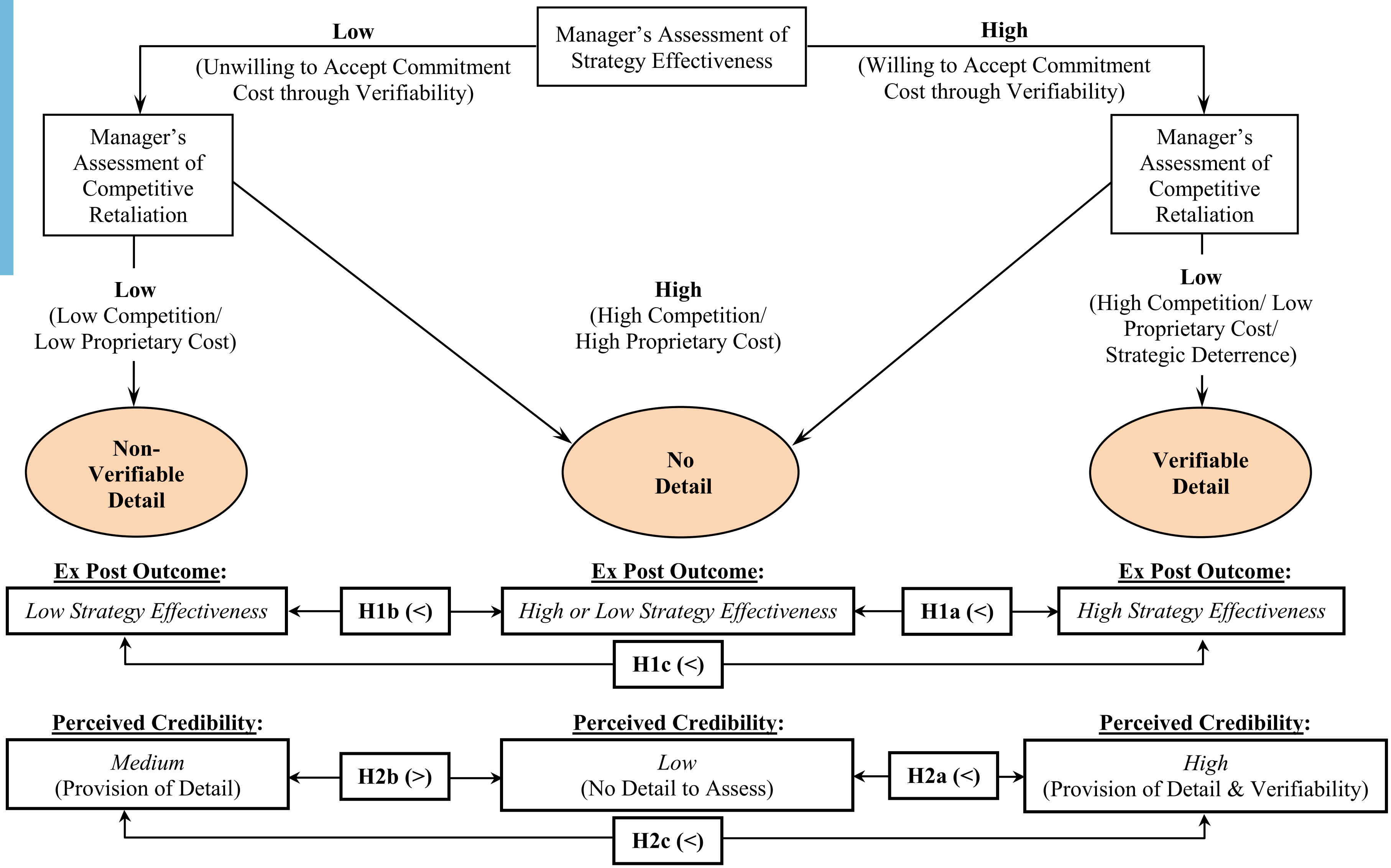
Figure 1. Management Decision Path Leading to Disclosure Choice



Note: Absent competition, proprietary costs cannot be high (i.e., there is no Low Competition/High Proprietary Cost scenario).

Table 1. Archival Study Sample Selection.		
	Total	
Reduction	Firms	Firm-years
Economy (1994 – 2008)	18,334	156,328
No regulated industries[a]	(1,193)	(10,556)
Sub-total unregulated Economy	17,141	145,772
Missing, zero or negative Sales and Cost of Goods Sold; missing Earnings before Interest and Taxes; Missing Market Value	(3,213)	(39,013)
Available Data	13,928	106,759
No reference to key words	(12,891)	(96,575)
Reference to key words	1,037	10,184
Fewer than seven observations, at least two years preceding/following disclosure[b]	(484)	(3,643)
Total available key word sample	553	6,541
Non-strategic key word references	(437)	(5,193)
Total referencing customer retention strategy	116	1,348
Outliers[c]	(20)	(346)
Total Sample	**96**	**1,002**
Sub-Sample: Verifiable detail customer retention strategy	39	405
Sub-Sample: Non-verifiable detail customer retention strategy	18	197
Sub-Sample: No detail customer retention strategy	39	400
Total Sample Firm-years limited to four preceding and four subsequent to disclosure year[c]	**96**	**777**
Sub-Sample: Verifiable detail customer retention strategy	39	318
Sub-Sample: Non-verifiable detail customer retention strategy	18	150
Sub-Sample: No detail customer retention strategy	39	309

Notes to Table 1:

[a] This paper removes the Utilities (four-digit NAICS 2211–2213) and Telecommunications (5131–5133, 5151–5152, 5171–5179) industries where competition is likely to be influenced by regulation. For example, Federal Communications Commission (FCC) regulation allows customers to keep phone numbers when changing service providers, significantly changing customers' switching costs. Quoting the most recent FCC press release, "Delays in number porting cost consumers money and impede their ability to choose providers based solely on price, quality and service (2009)."

[b] We require each firm to have at least seven and no more than nine firm-year observations within a window of four years prior and four years post-disclosure, with at least two consecutive observations immediately preceding and subsequent to the disclosure year. We impose these time horizon constraints to ensure sufficient observations to identify post-disclosure changes in performance while minimizing confounding effects associated with other changes in strategy not related to customer retention.

[c] Outliers: Firms with influential observations were identified using studentized residuals greater than three or less than negative three. Each firm is examined to determine whether influential observations are associated with changes in performance unrelated to the disclosed customer retention strategy. All firm observations (influential or otherwise) are dropped if the firm's influential observations are not clearly associated with the disclosed customer retention strategy and the observation is within a two-year window around the disclosure year. Individual influential firm-year observations are dropped (as opposed to all firm observations) in cases where the observations fall outside of the two-year window around the disclosure year. Detailed description of firm-by-firm outlier analysis is detailed in online supplement Table 1S.

Table 2. Means (Standard Deviations) for Experimental Manipulation Check and Follow-Up Questions Overall and by Condition.

		Detail/Verifiability			*Length*	
Question	***Overall***	***Verifiable Detail***	***Non-Verifiable Detail***	***No Detail***	***Short***	***Long***
I played the role of a financial analyst.	1.55 (2.71)	1.01 (2.42)	1.99 (2.72)	1.64 (2.92)	1.47 (2.86)	1.62 (2.57)
I believed the disclosure I evaluated…						
… contained *detail* about customer retention strategy.	–0.55 (3.19)	0.41 (2.71)	0.30 (3.00)	–2.34 (3.08)	–0.83 (3.16)	–0.28 (3.21)
…could be *verified* by someone outside the firm.	0.96 (2.74)	2.01 (2.26)	0.96 (2.74)	–0.05 (2.80)	0.92 (2.87)	1.00 (2.60)
… was *long*.	–2.29 (2.71)	–2.34 (2.37)	–2.51 (2.63)	–2.02 (3.09)	–2.54 (2.68)	–2.04 (2.73)
… was *informative*.	–0.26 (2.85)	0.21 (2.54)	0.49 (2.59)	–1.45 (3.01)	–0.43 (2.83)	–0.08 (2.87)
… was *realistic*.	1.47 (2.24)	1.76 (1.89)	2.17 (2.06)	0.51 (2.40)	1.51 (2.24)	1.44 (2.24)
… was *important*.	1.47 (2.32)	1.50 (1.82)	2.12 (2.12)	0.81 (2.74)	1.57 (2.35)	1.37 (2.29)
The task was easy to understand.	2.18 (2.35)	1.97 (2.13)	2.52 (2.13)	2.05 (2.74)	2.40 (2.30)	1.95 (2.40)
I put in a great deal of effort to complete the task.	0.41 (2.87)	0.13 (2.60)	0.39 (3.08)	0.71 (2.93)	0.33 (3.13)	0.49 (2.60)
I have a great deal of experience with financial analysis.	–0.84 (2.85)	–1.05 (2.85)	–0.47 (2.80)	–0.99 (2.90)	–0.70 (2.93)	–0.97 (2.77)
I have a great deal of experience with customer retention strategy.	–0.94 (2.87)	–0.79 (2.93)	–0.83 (2.77)	–1.20 (2.94)	–1.21 (2.83)	–0.67 (2.90)
I have a great deal of experience with non-financial disclosure.	–0.83 (2.48)	–0.46 (2.43)	–0.86 (2.48)	–1.16 (2.51)	–0.94 (2.53)	–0.72 (2.43)

Notes to Table 2:
All variables are measured on an 11-point scale with -5 labeled "strongly disagree" and 5 labeled "strongly agree."

Table 3. Descriptive statistics and correlations among variables used in the archival study.						
Panel A: Descriptive Statistics						
Samples	# Firm-years	Mean	Median	1st Quartile	3rd Quartile	Standard Deviation
Abnormal Selling, General, and Administrative Margin (SGAM)						
Total Sample	777	(2.2%)	(0.1%)	(4.2%)	2.0%	12.3 points
Sub-Samples:						
Verifiable Detail	318	(0.6%)	0.2%	(3.2%)	2.3%	7.6 points
Non-Verifiable Detail	150	(0.7%)	0.3%	(2.4%)	2.7%	8.4 points
No Detail	309	(4.6%)	(1.2%)	(7.1%)	1.1%	16.6 points
Market Share						
Total Sample	777	6.4%	0.7%	0.0%	6.0%	13.1 points
Sub-Samples:						
Verifiable Detail	318	6.0%	1.2%	0.0%	7.9%	10.4 points
Non-Verifiable Detail	150	7.1%	0.6%	0.0%	8.9%	13.8 points
No Detail	309	6.3%	0.3%	0.0%	4.6%	15.2 points
Herfindahl Industry Concentration Index						
Total Sample	777	0.20	0.16	0.07	0.25	15.9 points
Sub-Samples:						
Verifiable Detail	318	0.19	0.16	0.10	0.24	12.7 points
Non-Verifiable Detail	150	0.17	0.16	0.07	0.24	10.5 points
No Detail	309	0.22	0.16	0.07	0.25	20.3 points

Table 3. (continued)

Panel B: Abnormal Performance Descriptive Statistics by Year

Samples	four years prior	three years prior	two years prior	one year prior	Disclosure Year	one year after	two years after	three years after	four years after
Mean Abnormal Selling, General, and Administrative Margin (SGAM)									
Total Sample	(0.5%)	(2.3%)	(2.6%)	(1.6%)	(1.2%)	(2.5%)	(3.4%)	(3.1%)	(2.9%)
Sub-Samples:									
Verifiable Detail	(0.2%)	(2.6%)	(2.6%)	(0.0%)	(0.4%)	(0.2%)	0.2%	(0.2%)	1.0%
Non-Verifiable Detail	0.9%	0.1%	0.9%	0.9%	0.4%	(1.0%)	(1.8%)	(2.5%)	(5.4%)
No Detail	(1.5%)	(3.0%)	(4.3%)	(4.3%)	(2.7%)	(5.5%)	(7.7%)	(7.4%)	(6.7%)
Market Share									
Total Sample	6.0%	6.7%	6.3%	6.2%	6.2%	6.3%	6.3%	6.5%	7.0%
Sub-Samples:									
Verifiable Detail	6.0%	5.7%	5.5%	5.6%	5.8%	6.0%	6.3%	6.3%	7.9%
Non-Verifiable Detail	8.0%	7.4%	6.4%	8.0%	7.4%	7.5%	6.6%	6.9%	5.0%
No Detail	5.1%	7.2%	7.0%	6.0%	6.0%	6.0%	6.2%	6.6%	7.2%
Herfindahl Industry Concentration Index									
Total Sample	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16
Sub-Samples:									
Verifiable Detail	0.24	0.22	0.21	0.20	0.19	0.19	0.17	0.16	0.14
Non-Verifiable Detail	0.21	0.20	0.19	0.18	0.16	0.16	0.16	0.16	0.14
No Detail	0.24	0.23	0.22	0.23	0.23	0.22	0.21	0.19	0.19

Notes to Table 3:

Variable Definitions (Calculations using Compustat data items in brackets):

Abnormal Selling, General, and Administrative Margin: Selling, General, and Administrative Margin [(EBIT + COGS)/REVT] adjusted by Selling, General, and Administrative Margin from a four-digit NAICS industry [NAICS] peer matched on the average standardized log of market value of equity and Selling, General, and Administrative Margin for the four years prior to the disclosure year.

Market Share (%): Firm revenue [REVT] divided by four-digit NAICS [NAICS] industry revenue by firm-year.

Herfindahl Concentration Index: Market Concentration using a Herfindahl index by four-digit NAICS industry [NAICS] as measured by: $\sum_{i=1}^{N_{j,t}} (Mktshr_{i,t})^2$

where $Mktshr_{i,t}$ is Market Share, defined above, and $N_{j,t}$ is the total number of firms in industry j at time t reported by Compustat that have revenue [REVT] greater than zero.

***, **, *, ‡ indicate statistical significance at $p<0.001$, $p<0.01$, $p<0.05$, and $p<0.10$ levels respectively (two-tailed tests)

Table 4. Regression Results for Firms that Disclose a 10-K Customer Retention Strategy.

$$SGAM_{i,t} = \varphi_{1,i} NEG_{i,t-1} + \varphi_{2,i} POS_{i,t-1} + \varphi_3 NEG_{i,t-1} \times SGAM_{i,t-1} + \varphi_4 POS_{i,t-1} \times SGAM_{i,t-1} + \varphi_5 DISC_{i,t-1} \times NEG_{i,t-1} + \varphi_6 DISC_{i,t-1} \times POS_{i,t-1} + \varphi_7 DISC_{i,t-1} \times NEG_{i,t-1} \times SGAM_{i,t-1} + \varphi_8 DISC_{i,t-1} \times POS_{i,t-1} \times SGAM_{i,t-1} + \varphi_9 Mktshr_{i,t-1} + \varphi_{10} Herf_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

Variable	Coef.	Expected Regression Coefficient Sign	I Verifiable Detail	II No Detail	III Non-verifiable Detail
		(Effective Strategy / Not Effective Strategy)	Parameter (t-statistic)	Parameter (t-statistic)	Parameter (t-statistic)
$NEG_{i,t-1}$[1]	($\varphi_{1,i}$)	(– / –)	–0.041 (–4.12)***	–0.050 (–1.64)‡	0.003 (0.21)
$POS_{i,t-1}$[1]	($\varphi_{2,i}$)	(+ / +)	0.035 (6.81)***	0.059 (3.01)**	0.063 (5.24)***
$NEG_{i,t-1} \times SGAM_{i,t-1}$	(φ_3)	(+ / +)	0.169 (1.99)*	0.235 (1.98)*	0.650 (2.80)**
$POS_{i,t-1} \times SGAM_{i,t-1}$	(φ_4)	(+ / +)	0.258 (1.78)*	0.159 (1.73)*	0.341 (2.72)**
$DISC_{i,t-1} \times NEG_{i,t-1}$	(φ_5)	(? / 0)	–0.008 (–0.99)	0.007 (0.75)	–0.007 (–0.44)
$DISC_{i,t-1} \times POS_{i,t-1}$	(φ_6)	(? / 0)	–0.010 (–1.95)*	–0.006 (–1.37)	0.004 (0.56)
$DISC_{i,t-1} \times NEG_{i,t-1} \times SGAM_{i,t-1}$	(φ_7)	(0 / 0)	–0.064 (–0.50)	0.199 (1.59)	0.015 (0.06)
$DISC_{i,t-1} \times POS_{i,t-1} \times SGAM_{i,t-1}$	(φ_8)	(+ / 0)	0.329 (2.37)**	0.292 (4.08)***	–0.272 (–1.62)‡
$Mktshr_{i,t-1}$	(φ_9)	(+ / +)	–0.003 (–0.05)	–0.182 (–1.95)*	–0.125 (–1.43)‡
$Herf_{i,t-1}$	(φ_{10})	(+ / +)	–0.016 (–0.41)	–0.129 (–2.25)*	–0.125 (–1.35)‡
Firm-years (N)			306	298	146
Adjusted R^2			*0.849*	*0.938*	*0.869*

Hypothesis	Parameter Comparison	Parameter Values	t-statistic
H1a: Verifiable Detail firms have greater change in positive abnormal SGAM persistence than No Detail firms	$\varphi_{8,Verifiable\ Detail} > \varphi_{8,No\ Detail}$	0.329 > 0.292	0.31
H1b: No Detail firms have greater change in positive abnormal SGAM persistence than Non-Verifiable Detail firms	$\varphi_{8,No\ Detail} > \varphi_{8,Non\text{-}Verifiable\ Detail}$	0.292 > –0.272	3.43***
H1c: Verifiable Detail firms have greater change in positive abnormal SGAM persistence than Non-Verifiable Detail firms	$\varphi_{8,Verifiable\ Detail} > \varphi_{8,Non\text{-}Verifiable\ Detail}$	0.329 > –0.272	2.38**

Notes to Table 4:
Variable Definitions are consistent with those described in Table 3.
***, **, *, ‡ indicate statistical significance at p<0.001, p<0.01, p<0.05, and p<0.10 levels respectively (two-tailed tests)

Table 5. Experimental Study Results: *Credibility.*

Panel A: Least-Square Means for Individual Measures of *Credibility*

Measure	**Verifiable Detail**	**Non-Verifiable Detail**	**No Detail**
Credibility to Self	5.93	6.44	5.03
Credibility to Others	5.72	6.08	5.02
Credibility to Competitors	5.95	6.07	4.88

Panel B: ANOVA on *Detail/Verifiability* and *Length*

Source of Variation	***df***	***SS***	***MS***	***F*-stat**	***p*-value**
Detail/Verifiability	2	22.34	11.17	12.27	< 0.001
Length	1	0.00	0.00	0.00	0.970
Detail/Verifiability × Length	2	0.72	0.36	0.39	0.674
Residual	202	183.94	0.91		

Panel C: Tukey-Kramer Tests

Hypothesis	Comparison	*t*-statistic
H2a: Verifiable Detail is perceived as more credible than No Detail	Verifiable Detail > No Detail	3.411**
H2b: Non-Verifiable Detail is perceived as more credible than No Detail	Non-Verifiable Detail > No Detail	4.802***
H2c: Verifiable Detail is perceived as more credible than Non-Verifiable Detail	Verifiable Detail > Non-Verifiable Detail	1.386

Notes to Table 5:

"Detail/Verifiability" is coded 0 for the instrument that contains no detail, 1 for the instrument that contains non-verifiable detail, or 2 for the instrument that contains verifiable detail.

Credibility is measured as the factor score from a factor analysis of three individual measures of *Credibility*: *Credibility to Self,* measured by participants' response to the question "How credible is the disclosure to you as an investor?"; *Credibility to Others,* measured by participants' response to the question "How credible would the disclosure be to other investors?"; and *Credibility to Competitors,* measured by participants' response to the question "How credible would the disclosure be to the company's competitors?" All questions are measured on an 11-point scale with 0 labeled "Not credible", 5 labeled "Somewhat credible", and 10 labeled "Very credible." One factor, which explained 72.5% of the variance, was extracted from the factor analysis. The Eigenvalue of the factor equals 2.17. Correlations (p-values) between the three measures of *Credibility* are as follows: *Credibility to Self/Credibility to Others* 0.744 ($p < 0.001$); *Credibility to Self/Credibility to Competitors* 0.531 ($p < 0.001$); *Credibility to Others/Credibility to Competitors* 0.474 ($p < 0.001$). Factor loadings for each measure are 0.816 for *Credibility to Self*, 0.776 for *Credibility to Others*, and 0.583 for *Credibility to Competitors*. The factor score is the sum of the standardized scores for each variable multiplied by the standardized scoring coefficient for each variable. Standardized scoring coefficients are 0.415 for *Credibility to Self*, 0.405 for *Credibility to Others*, and 0.351 for *Credibility to Competitors.*

Detail/Verifiability is a three-level categorical variable coded as 0 for No Detail, 1 for Non-Verifiable Detail, and 2 for Verifiable Detail.

Online supplemental materials to

Do Detail and Its Verifiability Serve as Indicators of Strategy Effectiveness and as Sources of Credibility in Voluntary Qualitative Disclosure?

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Table 1S. Sample Selection Outlier Analysis.

Firms with influential observations were identified using studentized residuals greater than three or less than negative three. Each firm is examined to determine whether influential observations are associated with changes in performance unrelated to the disclosed customer retention strategy. All firm observations (influential or otherwise) are dropped if the firm's influential observations are not clearly associated with the disclosed customer retention strategy and the observation is within a two-year window around the disclosure year. Individual influential firm-year observations are dropped (as opposed to all firm observations) in cases where the observations fall outside of the two-year window around the disclosure year. Detailed descriptions of dropped firms/observations follow:

- Meditrust merged with La Quinta in 1998 (two years prior to the disclosure year) substantially changing the firm's cost structure. All observations are dropped.
- Prior to 1997 (two years prior to the disclosure year), Illinois Superconductor Corporation provided a large proportion of its R&D investment based on government contracts. After 1997, the government contracts were terminated substantially changing the firm's cost structure. All observations are dropped.
- In 2007 and 2008 (three and four years subsequent to disclosure), Hanmi Financial incurred substantial (~30% of revenue) impairment expenses associated with Goodwill. 2007 and 2008 firm-year observations are dropped.
- In 2006 (two years subsequent to disclosure), AXS-One discontinued its Enterprise Solutions product line substantially decreasing revenue (~65% decrease). All observations are dropped.
- youbet.com was in start-up phase during the three years leading up to the disclosure year. First revenue appeared part-way through 1998. During this same time, youbet.com incurred substantial start-up operating expenses (370%–4300% of revenue). All observations are dropped.
- Prior to 2001 (two years prior to disclosure), Stage Stores restructured as part of Chapter 11 Bankruptcy. Observations prior to 2001 (three and four years prior to disclosure) are dropped.
- iLinc Communications discontinued its dental practice software suite in 2003 (the disclosure year), significantly influencing revenue and cost structure. All observations are dropped.
- VA Software discontinued its Professional Services and Linux software engineering divisions in fiscal 2002 (two years prior to disclosure) due to economy-driven poor operating performance, significantly influencing revenue and cost structure. All observations are dropped.
- In 1999 (two years prior to disclosure), Safeguard Health Enterprises recorded an unusually large asset impairment disproportionately inflating general and administrative expense. All observations are dropped.
- In 1998 (four years prior to disclosure), Matria Healthcare performed the significant acquisition of Quality Diagnostic Services. In 2004 (two years subsequent to disclosure), they discontinued the direct-to-consumer pharmacy and supplies division decreasing approximately two-thirds of its revenue. All observations are dropped.
- In 2000 (one year subsequent to disclosure), ECCS lost a substantial portion (~80%) of government contract revenue due to a federal investigation into Air Force purchasing. All observations are dropped.
- In 2005 (two years subsequent to disclosure), Mediabay lost a substantial portion (~40%) of subscription revenue due to a change in renewal policy from auto-renewal to customer-initiated renewals. Note: This verifiable change in strategy is not explicitly described in the non-verifiable customer retention disclosure two years prior. The results (if the firm is included in the sample) would imply that non-verifiable firms are associated with poor future performance relative to verifiable firms. However, the results are explicitly confounded by a subsequent change in customer-related strategy. All observations are dropped.
- In 2001 (two years prior to disclosure), Onvia discontinued its low-margin business-to-business segment. All Onvia observations are dropped.
- In 1999 and 2000 (three and two years prior to disclosure), Precision Auto Care recorded an unusually large amount of bad debt expense and litigation expense disproportionately inflating general and administrative expense. All observations are dropped.
- In 2005 (two years subsequent to disclosure), Prologis underwent a substantial acquisition (>100% increase in revenue) of Catellus. All observations are dropped.
- In 1999 (three years prior to disclosure), A.D.A.M. added an internet segment substantially changing is cost model. Observations prior to and including 1999 are dropped.
- In 2005, (two years subsequent to disclosure), GS Financial recorded a substantial (~50% if revenue) provision for loan losses associated with Hurricane Katrina. All observations are dropped.
- In 2001, (the disclosure year), Gametech International recorded a substantial (5% of revenue) one-time charge for the launch of a new product. All observations are dropped.

- In 2001 and 2002 (two and three years prior to disclosure), Bottomline Technologies recorded substantial (40-45% of revenue) impairment expenses associated with intangible assets. All observations are dropped.
- In 2002 (two years prior to disclosure), Intraware established a strategic relationship with iPlanet E-Commerce Solutions, significantly changing the structure of revenue/costs. All observations are dropped.
- In 2004 (two years prior to disclosure), Nobel Learning Communities discontinued operations involving 19 properties, significantly influencing return on sales. All observations are dropped.
- In 2003 (one year prior to disclosure), Leucadia National Corporation merged with WilTel Communications Group, significantly influencing profitability. All observations are dropped.
- In 1999 and 2000 (three and four years prior to disclosure), Harbinger Group Inc. (formerly Zapata Corp.) underwent substantial inventory write-downs. Observations prior to and including 2000 are dropped.

Table 2S. Number of Customer Retention Strategy Disclosures by Year and Industry.

N=96 Firms	Disclosure Year[a]									
two-digit NAICS Code	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total Firms
23 – Construction						3				3
31-33 – Manufacturing		2		1		3	3	1	2	12
42 – Wholesale Trade						2	1	2		5
44-45 – Retail Trade	2	1	2			3	5			13
48 – Transportation and Warehousing					1	1				2
51 – Information			1		2	1	1			5
52 – Finance and Insurance	1	2	1	3	4	14	5	5	2	37
53 – Real Estate, Rental and Leasing						1				1
54 – Professional, Scientific, and Technical Services						4				4
56 – Administrative and Support, Waste Management, and Remediation Services		1				2		1	2	6
62 – Health Care and Social Assistance					1	1				2
71 – Arts, Entertainment, and Recreation		1				1			1	3
81 – Other Services				1			1			2
99 – Unclassified						1				1
Total # of Firms	3	7	4	5	8	37	16	9	7	96

Notes to Table 2S:
NAICS Industry codes and descriptions taken from the 2007 updated North American Industry Classification System.
Disclosure Years reference firm fiscal years.
[a] The Disclosure Year references the first chronological occurrence in which a firm discloses customer retention strategy.

Table 3S. Correlations among variables used in the archival study.

Pearson (Spearman) correlation on the upper (lower) diagonal

N=750	SGAM	Market Share	Herfindahl Index
Abnormal Selling, General, and Administrative Margin (SGAM)		0.157***	–0.028
Market Share (%)	0.065‡		0.531***
Herfindahl Industry Concentration Index	–0.054	0.635***	

Notes to Table 3S:

Consistent Cheng (2005), we observe a positive pairwise correlation between market share and peer-adjusted performance (Spearman, $p < 0.10$; Pearson, $p < 0.001$) in our setting. We observe no significant pairwise correlation between industry concentration and peer-adjusted performance, likely because those matched peers are within the same industry.

Variable Definitions (Calculations using Compustat data items in brackets):

Abnormal Selling, General, and Administrative Margin	Selling, General, and Administrative Margin [(EBIT + COGS)/REVT] adjusted by Selling, General, and Administrative Margin from a four-digit NAICS industry [NAICS] peer matched on the average standardized log of market value of equity and Selling, General, and Administrative Margin for the four years prior to the disclosure year.
Market Share (%)	Firm revenue [REVT] divided by four-digit NAICS [NAICS] industry revenue by firm-year.
Herfindahl Concentration Index	Market Concentration using a Herfindahl index by four-digit NAICS industry [NAICS] as measured by: $\sum_{i=1}^{N_{j,t}} (Mktshr_{i,t})^2$ where $Mktshr_{i,t}$ is Market Share, defined above, and $N_{j,t}$ is the total number of firms in industry j at time t reported by Compustat that have revenue [REVT] greater than zero.

***, **, *, ‡ indicate statistical significance at $p<0.001$, $p<0.01$, $p<0.05$, and $p<0.10$ levels respectively (two-tailed tests)

Online Appendix A

Archival Study Sample Matching Procedure

We use two steps in the matching process. First, we require that the firms share the same 4-digit North American Industry Classification System (NAICS) code unless there are too few firms classified as such, in which case we match on 3-digit or 2-digit NAICS.

Second, we create a size and pre-disclosure composite performance score. We measure firm size by logarithmically transforming firm market value of equity. In addition, we use industry mean-adjusted gross margin and SGAM, calculated each year for the years leading up to and including the disclosure year. We then standardize the values of firm size and industry mean-adjusted gross margin and SGAM using a z-score transformation so that all three measures have the same distribution.

We calculate a composite matching score by adding together the sums of squares for the difference in each measure between prospective matched firms and disclosing firms. We match each disclosing firm with a matched firm that has the lowest composite score. In an untabulated analysis, we find no difference in average firm size, gross margin, or SGAM between the disclosure firm sample and the matched firm sample for the years leading up to and through the disclosure year.

We examine matched firms for confounding economic events that occur within the post-disclosure period (such as acquisitions/dispositions that significantly alter performance). When a comparator is found to have confounding post-disclosure activities, we select the next best match.

Online Appendix B

Examples of Strategy Disclosures

The following examples are actual customer retention disclosures included in 10-K filings from each sub-sample:

Verifiable Detail Firms

1. Apple Inc. provides the following reference to customer retention strategy in its fiscal year 2004 10-K filing:

> "The Company believes a high quality buying experience with knowledgeable salespersons… is critical to attracting and retaining customers. As such, … the Company has expanded its product distribution strategy to include… the Apple Sales Consultant Program…, which is designed to enhance reseller sales by the placement of Apple badged employees at selected third-party reseller locations."

This is coded as a customer retention strategy with a *high* level of verifiable detail. The placement of Apple Sales Consultant program employees can be verified by parties external to the firm.

2. CVS Caremark Corporation provides the following reference to customer retention strategy in its fiscal year 2000 10-K filing:

> "We are currently beginning the chain wide rollout of our new relationship marketing program, the ExtraCare Card. Through the ExtraCare card, we will offer special promotions and incentives to our best customers to reward their patronage and encourage increased loyalty."

This is coded as a customer retention strategy with a *high* level of verifiable detail. The existence of an ExtraCare card can be verified by parties external to the firm.

3. Citigroup Inc. provides the following reference to maintaining focus on increasing customer retention in its fiscal year 2001 10-K filing:

> "[In 2001], Citibank invested in programs and staff to improve operations and customer service while continuing to control overall expenses. In addition, Citibank continues to emphasize its needs-based sales approach through Citipro, a complimentary financial analysis that assesses customers' needs and recommends appropriate financial products to meet those needs. The key elements to grow our earnings will be increasing sales productivity in the Financial Centers; increasing customer retention through focused

> marketing, cross selling and technology; streamlining processes and investing in appropriate technology to improve productivity and cost efficiency, which, in turn, will enhance price flexibility; and improving customer service and satisfaction."

This is coded as a customer retention strategy with a *high* level of verifiable detail. The reference describes 'Citipro,' a program to "assess customers' needs" that can be verified by parties external to the firm.

4. Hughes Supply, Inc. provides the following reference to customer retention strategy in its fiscal year 2004 10-K filing:

> "The key elements of our strategy are to: … buy, operate and sell as one integrated, streamlined organization. Specific actions taken or to be taken include the following: … The continued execution of best-in-class marketing programs, targeting both customers and vendors, which are designed to build on the Hughes brand name, to increase incremental revenues, improve customer retention and enhance business relationships across the supply chain."

> "Our marketing programs build Hughes brand awareness and bring value to the supply chain by helping our vendors market and sell their products to a broad customer base. We are continuing to execute our best-in-class marketing programs, and we believe the following marketing materials and programs are unparalleled in our industry and differentiate us from our competitors: The creation of best-in-class promotional product brochures that provide our sales force with the tools they need to increase sales, while providing our vendors with an opportunity to participate in our comprehensive targeted sales program; The production of comprehensive product line catalogs with color photos that showcase vendors' products and facilitate routine ordering for customers; Unrivaled customer awards programs that drive incremental sales and build customer loyalty; and The hosting of themed marketing events throughout our major markets attended by thousands of our customers, which provides us with the opportunity to show customer appreciation while allowing our vendors to showcase their quality products."

This disclosure is coded as a customer retention strategy with a *high* level of verifiable detail. The reference describes specific marketing programs (product brochures, catalogs, customer awards programs, themed marketing events) that can be observed by parties external to the firm.

Non-Verifiable Detail Firms

1. Dimeco, Inc. provides the following reference to customer retention strategy in its fiscal year 2004 10-K filing :

> "The Company instituted a training initiative in 2003 to boost the level of service provided by employees to our customers and paid a consultant $26 to implement the training. We believe that one of the best methods to retain customers is to offer the best service in our markets."

This is coded a customer retention strategy with a *high* level of detail and a *low* level of verifiability. The strategy references a consultant-facilitated training initiative, which cannot be verified by parties external to the firm.

2. Parkway Properties, Inc. provides the following reference to customer retention strategy in its fiscal year 2003 10-K filing:

> "Management has developed a highly service-oriented operating culture and believes that its focus on operations, proactive leasing, property management and asset management activities will result in higher customer retention and occupancy and will continue to translate into enhanced stockholder value."
>
> "The primary drivers behind Parkway's revenues are occupancy, rental rates and customer retention."
>
> "Keeping our existing customers is important as high customer retention leads to increased occupancy, less downtime between leases, and reduced tenant improvement and leasing costs. Parkway estimates that it costs six times more to replace an existing customer with a new one. This ratio represents the sum of downtime on the space plus leasing costs, which rise as market vacancies increase. Therefore, Parkway focuses a great deal of energy on customer retention. Parkway's operating philosophy is based on the premise that we are in the customer retention business. Parkway seeks to retain its customers by continually focusing on operations at its office properties. The Company believes in providing superior customer service; hiring, training, retaining and empowering each employee; and creating an environment of open communication both internally and externally with our customers and our stockholders."

This disclosure is coded a customer retention strategy with a *high* level of detail and a *low* level of verifiability. The disclosure references customer service, employee investments, and communication. However, none of these investments can be verified by parties external to the firm.

3. Brink's Co. (BHS) provides the following reference to customer retention strategy in its fiscal year 2003 10-K filing:

> "BHS believes its customer retention rate is the highest among the major home security service companies. BHS believes this favorable retention rate is due to its focus on selecting new customers with strong credit backgrounds and the high quality of customer service its provides."
>
> "Because Brink's management believes that the high level of service and security provided differentiates Brink's from its competitors, Brink's resists competing on price alone."
>
> "The availability of quality and reliable insurance coverage is an important factor in the ability of Brink's to obtain and retain customers and to manage the risks of its business."

This disclosure is coded a customer retention strategy with a *high* level of detail and a *low* level of verifiability. The disclosure refers to selecting customers with 'strong credit backgrounds' and focus on service quality as key elements of customer retention strategy. The credit background is opaque to parties external to the firm while service quality is subjectively determined.

4. Washington Mutual, Inc. provides the following reference to customer retention strategy in its fiscal year 2001 and 2003 10-K filings:

> "[In 2001:] The Specialty Finance Group's multi-family lending program revolves around three key elements: originating loans, servicing loans and providing ancillary banking services to enhance customer retention. Combining these three elements under one umbrella has allowed the group to attain a leading market position in this field."
>
> "[In 2003:] The multi-family lending business, which accounts for the majority of the Group's revenues, is comprised of three key activities: originating and managing loans retained in the loan portfolio, servicing loans and providing ancillary banking services to enhance customer retention. Combining these three activities into one integrated business model has allowed the Group to become a leading originator and holder of multi-family loans. The Group's multi-family lending program has a dominant market share of more than 20% in certain key cities along the west coast and is building market share on the east coast with recent office openings in Boston, Washington, D.C., and Miami."

This disclosure is coded a customer retention strategy with a *high* level of detail and a *low* level of verifiability. The disclosure refers to combining three activities into an integrated business model. The combination of internal operations cannot be verified by parties external to the firm.

No Detail Firms

1. SRI/Surgical Express, Inc. provides the following reference to customer retention strategy in

its fiscal year 2002 10-K filing:

> "The new management team is continuing initiatives started last year to refocus attention on SRI's existing customers, with the objective of stemming loss of customers that adversely affected revenues beginning in the second half of 2001 and returning the Company to its historically high customer retention levels."

This disclosure is coded a customer retention strategy with a *low* level of verifiable detail. There are no details regarding the 'initiatives' referenced in the disclosure.

2. Nationwide Financial Services, Inc. provides the following reference to customer retention strategy in its fiscal year 2001 10-K filing:

> "Lower surrender charges in 2001 compared to 2000 were the result of the successful implementation of customer retention programs in the individual variable annuity business during the year. These programs were created as the heightened competitive environment in 2000 led to increased surrender activity and related fees."

This disclosure is coded a customer retention strategy with a *low* level of verifiable detail. There are no details regarding the 'programs' referenced in the disclosure.

3. Zunicom, Inc. provides the following reference to customer retention strategy in its fiscal year 2006 10-K filing:

> "Customer retention and strengthening current relationships to participate in new business opportunities is important to UPG, and it emphasizes this throughout its organization."

This disclosure is coded as a customer retention strategy with a *low* level of verifiable detail. The disclosure provides no implementation details to be verified.

4. 1st Constitution Bancorp provides the following reference to customer retention strategy in its fiscal year 2003 10-K filing:

> "The Bank offers a variety of products designed to attract and retain customers, with the Bank's primary focus being on building and expanding long-term relationships."

This disclosure is coded as a customer retention strategy with a *low* level of verifiable detail. The disclosure references product variety, which is subjective and cannot be easily verified by parties external to the firm.

Online Appendix C

Archival Study Detail/Verifiability Coding Procedure

Each of the two independent coders received the following direction to judge the presence and verifiability of detail:

> "HIGH DETAIL/LOW DETAIL – High detail refers to disclosures that provide specific actions taken or that will be taken to retain customers, engage in customer retention, and/or that are part of a relationship marketing program. Note that detail refers to specific actions, not desired outcome (i.e., customer satisfaction). Low detail refers to cases in which the disclosure does not provide enough detail for the reader to get a clear picture of how the firm intends to implement its strategy."

> "HIGH VERIFIABILITY/LOW VERIFIABILITY – High verifiability refers to high detail disclosures in which detail is easily observable by users outside the firm, such as installing new equipment in retail outlets. Low verifiability refers to cases in which the disclosure provides enough detail for the user to understand how the firm intends to implement its strategy, but those details are not easily observable by anyone outside the firm, such as installing new equipment at firm headquarters."

Note that verifiability coding is N/A for low detail firms. There were 26 disclosures (27% of the sample) that were assessed differently by the two coders. An independent co-author resolved these differences. The empirical results are materially the same if the 26 disclosures are excluded from the analyses.

Online Appendix D

Wording for the Different Levels of Detail/Verifiability in the Experimental Study

The following are the disclosures used in the experimental instrument.

Verifiable Detail

> "The Company maintains a customer retention program that uses purchase information to make customized offerings to profitable customers by email, which they can print at kiosks in our stores. This program should increase retention among our most profitable customers."

> "The Company maintains a customer retention program that involves analyzing purchase information and using that analysis to customize product offerings to our most profitable customers. The offers are then communicated to customers by e-mail or other digital media. Customers are able to print their customized offers at kiosks found at our store entrances. The Company expects that this program will increase retention among our most profitable customers."

Non-Verifiable Detail

> "The Company maintains a customer retention program that involves analyzing purchase information and using that analysis to customize product offerings to our most profitable customers. The Company expects that this program will increase retention among our most profitable customers."

> "The Company maintains a customer retention program. This customer retention program involves collecting customer purchase information, and then analyzing that customer purchase information to classify our customers and predict product offerings that each customer will prefer. The company then uses this customer purchase information to customize product offerings to our most profitable customers. The Company expects that this program will increase retention among our most profitable customers."

No Detail

> "The Company maintains a customer retention program. The Company expects that this program will increase retention among our most profitable customers."

> "The Company maintains a customer retention program, which we have designed to identify and retain our most profitable customers. This customer retention program has been in place at the Company for some time, and we plan to continue the program in the future. The Company believes that by continuing our customer retention program, we will continue to be able to increase retention among our most profitable customers."