THE IMPACT OF UNPROFITABLE CUSTOMER MANAGEMENT STRATEGIES ON SHAREHOLDER VALUE

Hui Feng
Iowa State University
College of Business
3337 Gerdin Business Building
Ames, IA 50011-1350
Phone: (515) 294-3815
Email: huifeng@iastate.edu

Neil A. Morgan
Indiana University
Kelley School of Business
1309 E. Tenth St.
Bloomington, IN 47405-1701
Phone: (812) 855-1114
Fax: (812) 855-6440
Email: namorgan@indiana.edu

Lopo L. Rego
Indiana University
Kelley School of Business
1309 E. Tenth St.
Bloomington, IN 47405-1701
Phone: (812) 855-1202
Fax: (812) 855-6440
Email: lrego@indiana.edu

THE IMPACT OF UNPROFITABLE CUSTOMER MANAGEMENT STRATEGIES ON SHAREHOLDER VALUE

Abstract

A significant proportion of many firms' customers are unprofitable. The question of how unprofitable customers should be managed has recently received increasing research attention from the customer and manager angles, but the effects of unprofitable customer management (UCM) strategies on shareholder value is unknown. Using an event study methodology, we examine stock market reactions to disclosures of firms' UCM strategy decisions. Results from a sample of UCM strategy disclosure events reveal an average short-term abnormal stock return of -0.53%. Drawing on signaling theory logic, we explore a number of signal (UCM strategy), signaler (firm engaging in UCM), and signaling environment characteristics that may affect the shareholder value effects of firms' UCM approaches. Our analyses show that investors respond more favorably to indirect UCM strategies than to direct customer divestment strategies. We also find that particular types of indirect UCM strategy approaches and strategic intent in UCM strategy adoption, stronger firm marketing capabilities and, and positive publicity can help mitigate the generally negative abnormal stock returns observed. Overall, our findings have important implications for marketing theory and provide actionable new insights for managers into how to approach the management of unprofitable customers.

Keywords: Customer Relationship Management; Customer Relationship Termination; Unprofitable Customer Management; Event Study; Abnormal Stock Return

Introduction

A substantial proportion of most firms' customers are unprofitable, creating a significant performance drag (Shah et al. 2012; Mittal and Sarkees 2006). As a result, it has been argued that firms should selectively "demarket" to or even "fire" such customers (Lepthien et al. 2017; Miklos-Thal and Zhang 2013; Shin et al. 2012). The literature depicts such moves as "unprofitable customer management" (UCM), i.e., seller-initiated actions aimed at customers who provide insufficient value to the firm with the goal of either increasing their value or terminating their relationship with the seller (e.g., Haenlein et al. 2006; Mittal et al. 2008; Ryals 2005). However, it is not obvious how such strategies may impact firm value because, although the intention is to increase average customer profitability, such actions may also result in a smaller customer base, generate extra costs, and risk spillover effects on other existing and potential customers.

Understanding the consequences of UCM strategies is managerially and theoretically interesting for a number of reasons. First, unprofitable customers are a prevalent phenomenon and most firms lose money on a significant proportion of their customers (Haenlein and Kaplan 2012; Mittal and Sarkees 2006). Thus, insights into how to best manage such customers are of real economic importance. Second, the literature reveals increasing management attention paid to—and incidence of—customer divestments and other UCM approaches. Yet, no prior research has examined the shareholder value consequences of UCM strategies, and press reports on their outcomes are conflicting (Table 1). Thus, managers have no reliable insights into the overall net effects of UCM approaches. Third, existing UCM research focuses on manager (e.g., Reinartz et al. 2004; Shin et al. 2012) and customer (e.g., Haenlein and Kaplan 2012; Lepthien et al. 2017; Haenel et al. in press) perspectives—the shareholder perspective has been largely ignored (see Table 2). This is surprising as stock prices are forward-looking, incorporate both risk and return

considerations, and are widely used to evaluate firms' top executives and guide their decisions.

Examining stock returns is useful in this context, since payoffs to customer relationship management (CRM) strategy take time and firms do not immediately see the full product market or accounting outcomes of UCM strategies. However, investors are generally well informed and forward-looking, using all available information to assess the likely level and risks to future cash flows and residual value of the firm's assets once its strategic decisions become known (e.g., Katsikeas et al. 2016). Thus, unanticipated news regarding firm UCM actions may quickly affect investors' expectations and their valuation of the firm. Research on similar strategic decisions such as CRM outsourcing and brand disposal have shown an immediate impact on firms' short-term stock returns (e.g., Kalaignanam et al. 2013; Wiles et al. 2012). We therefore use short-term abnormal stock returns to assess the shareholder value impact of UCM strategies, and assess any long-term impact in robustness tests.[1]

However, the likely direction of investor responses to new information regarding a firm's lower value customers and its approach to dealing with them is unclear. The CRM literature suggests that UCM may reduce the costs of serving low value customers, increase the average value of customers who remain, and increase resources available to serve more profitable customers (Homburg et al. 2008; Mittal et al. 2008). Yet the literature also suggests that a firm's UCM actions may not necessarily result in increased cash flows and an enhanced valuation of the firm's customer equity for at least two reasons.

First, managers may often underestimate the costs involved. For example, the literature indicates that UCM may generate both direct and indirect costs. Direct costs identified include

[1] In this approach, the "event" concerns disclosures (either voluntary or involuntary) concerning firms' UCM strategies. We use the event study method because although a prevalent phenomenon, such customer management strategies are difficult to observe; one way they can be studied is to examine public disclosures about such decisions. An obvious drawback is potential selection bias. To control for firms who adopt UCM strategies but this information stays private, or firms who do not engage in UCM at all, we identify significant predictors of firms' adopting UCM and use these in the first stage of a Heckman two-step model to control for such selection bias in our later analyses.

negotiation costs, termination compensation, and even litigation fees (Giller and Matear 2001; Pressey and Mathews 2003). Additionally, firms lose all previous investments in any resulting lost customers (Haenlein et al. 2006), and economies of scale may be lowered (Mittal et al. 2008). Indirect costs identified include search costs to find higher value replacement customers (Pressey and Mathews 2003) and extra costs to guard remaining high-value customers from rivals (Subramanian et al. 2007).

Second, in addition to such costs, there are also risks to both non-directly affected customers and prospective customers from firms' UCM strategies. For example, directly affected customers may engage in negative WOM, causing reputational damage that can affect the firm's relationship with both remaining customers and prospective customers (Lepthien et al. 2017). This creates additional costs such as public relations (PR) expenses to deal with possible negative publicity (Giller and Matear 2001; Pressey and Mathews 2003). It can also lead to the firm needing to compensate new and remaining high-value customers to offset potential negative image effects from UCM (Haenlein and Kaplan 2012). In addition, the literature suggests that UCM strategies risk decreasing firms' bargaining power with remaining "top-tier" customers (Homburg et al. 2008).

Given these costs and risks to future cash-flows, it is unclear how these may "net-out" in terms of both accounting outcomes[2] and investor value assessments—and the outcome may conceivably be either positive or negative. To examine this issue we draw on signaling theory logic and the CRM and stock valuation literature to answer three key questions. First, how does the stock market react to news of firms' UCM strategies? Do investors reward or punish firms for disclosures concerning their low value customers and how the firm intends to manage them?

[2] The only study to have investigated the accounting performance outcomes of direct UCM actions—customer divestment (Reinartz et al. 2004) found weak and conflicting results when perceptual and objective (ROA) performance measures are used. No prior study has investigated shareholder value outcomes.

Second, how are investors' reactions shaped by the content of the UCM disclosure? Are some types of UCM goals and strategies valued more than others? Third, how do firm and environment characteristics affect investor responses to firms' UCM actions? Do they react differently to otherwise similar UCM strategy disclosures?

In answering these questions, our study offers three main contributions. First, adopting the shareholder perspective, we examine the abnormal stock returns that reflect investors' collective assessment of the prospective cash flow and asset value impact of UCM strategies. We find that on average, the stock market penalizes a firm's stock on disclosure of UCM strategies, suggesting that either investors view the costs and risks of UCM as outweighing its benefits and/or that the new UCM information leads them to revise downwards their previous valuation of the firm's customer equity. This provides the first empirical evidence of the shareholder value impact of UCM strategies and will help managers who are largely uncertain of its likely effects make key CRM strategy decisions.

Second, while the literature offers a range of normative prescriptions regarding strategies that firms should use to manage or terminate relationships with low value customers, our study presents the first empirical insights into the effects of such strategies on firm value. Specifically, we find that the stock market's average negative response is mitigated by UCM strategy choices (i.e., indirect approaches such as distancing), the firm's strategic intent in making the UCM strategy choice (i.e., to focus on customers in its core business or to re-allocate resources to more profitable customers), and positive publicity associated with news of the firm's UCM strategy. These findings provide managers with new insights into how to plan, execute, and communicate strategies for managing unprofitable customers.

Third, our analyses reveal that the level of the firm's marketing capabilities also mitigate the overall negative investor response to news of a firm's UCM strategy. Specifically, when a firm has weak marketing capabilities, investors may view new information regarding a firm's

UCM approach as an indicator of "poor" CRM and lower their expectations of the firm's future cash flows and their risks, and their valuation of the firm's customer equity. In addition, we find that poor prior performance and positive publicity can also mitigate the negative response from investors to UCM disclosures. This confirms prior research showing that investors use other information about a firm to interpret and respond to disclosures regarding its strategic decisions.

In the next section, we outline the conceptual framework for our study and develop a set of testable research hypotheses. Then we describe the research method adopted, data collection, and estimation methods used to test these hypotheses. Next, we present and discuss our findings and consider their implications. Finally, we examine the study's limitations and present ideas for future research arising from our results.

– Insert Tables 1 and 2 Here –

Conceptual model and hypotheses

UCM refers to firm-initiated actions with respect to customers who provide insufficient value to the firm designed to either increase the customer's value or terminate their relationship with the firm. Firms initiate UCM actions when some of their customers have relatively low profitability and tie up resources that could be used to serve more profitable customers (Mittal et al. 2008; Zeithaml et al. 2001).[3] The literature suggests that UCM is a process consisting of activities including assessment of customer value, renegotiation of the value proposition, migration of customers, and termination of relationships (e.g., Haenlein and Kaplan 2012; Mittal and Sarkees 2006; Reinartz et al. 2004). While UCM has generally been viewed as desirable by CRM scholars, it is unclear how investors may respond to such moves and what factors may affect their response.

[3] Firms also engage in direct UCM strategies by divesting customers for other reasons including government regulations and shifts in business strategy (e.g., Mittal et al. 2008). While, we control for these in our analyses, the focus in this study is on low customer value as the driver of firms' UCM strategies.

Investors value firms on the basis of expected future cash-flows over a future period, likely risks to those cash-flows during this period, and the expected residual value of the firm's assets at the end of the period (e.g., Bayer et al. 2017; Kumar and Shah 2009).[4] Over the past decades the role of intangible assets in generating cash-flows, the risks to those cash-flows, and the residual value of the firm has grown dramatically, dwarfing that of tangible assets for most industries and firms (e.g., Stewart and Morgan 2019). However, intangible asset-based cash-flows, risks, and residual values are harder for investors to estimate as they involve assets such as customer relationships, brands, and intellectual property (Srinivasan and Hansens 2009). While investors have access to concrete public information concerning the firm's tangible asset values, expected life, etc. from financial statements for public firms, this is generally not true with most intangible assets such as its brands and customer relationships (Bayer et al. 2017).

When information about a firm's intangible assets is available, investors clearly use this in their valuations. For example, studies have shown that when concrete information about firms customer base is available (e.g., customer churn and acquisition rates in subscription-based businesses and some contractual businesses such as telephone and cable companies), it can be used to compute the firm's customer equity (the total value of the firms current and expected customers lifetime value) which closely tracks valuations of the firm's stock (e.g., Bonacchi et al. 2015; Gupta et al. 2004; McCarthy and Fader 2018). A firm's managers may have a great deal of data about its customers which provides the opportunity to develop valuations of individual customer relationships and assess the quality and value of the firm's overall customer base (e.g., Kumar and Shah 2009). Yet, in most industries (and for almost all non-public firms), this private information is not publicly available, creating an information asymmetry between firms'

[4] Finance theory suggests that the residual value of the firm is determined by the quality of the firm's tangible and intangible assets (such as customer relationships and brands), as these influence the level, risk, growth and longevity of the firm's longer-term future expected cash flows.

managers and investors. As a result, investor valuations of firms' customer equity is uncertain and any new information proving insight into the size and profitability of a firm's existing and likely future customer base is likely to be value relevant (e.g., Bayer et al. 2017).

The primary theory lens used in examining behavior in the context of such information asymmetries concerning private information regarding quality (in this case the quality—and therefore value—of the firm's current and expected future customer relationships) is signaling theory (e.g., Spence 2002). Signaling theory is concerned with how such information asymmetries may be reduced by one party providing signals of its underlying quality to another party when there are potential costs and/or risks to the discloser associated with signaling. (e.g., Kirmani and Rao 2000). Signaling theory posits that when one party perceives these costs/risks to be lower than the likely benefits, they will reveal information to the other party that signals their true quality and reduces information asymmetry (Connelly et al. 2011). Signaling theory has been used to explain firm quality and IPO acquisition (Reuer et al. 2012), the quality—and therefore value—of brands in online markets (Waldfogel and Chen 2006), and as a means of addressing asymmetric information about the quality of used cars (Lewis 2011).

In the case of UCM, investors are interested in information concerning the quality of the firm's customer base and the ability of the firm to generate cash flows from its customers as this helps them more accurately value the firm. However, it may be costly and risky for managers to share private information concerning both the value of a firm's customers and its ability to generate cash flows from its customers with investors for a number of reasons. First, managers may view information concerning its customer base as being of value to rivals in developing and executing their competitive strategies (e.g., Bayer et al. 2017; Berger and Haan 2007). For example, knowledge of which customers are the least valuable to a firm may give rivals insight into the firm's likely resource allocations and marketing moves. Second, customers may respond negatively to such information if it leads them to see the firm as being more interested in

generating cash flows than in engaging in mutually beneficial relationships (e.g., Mittal et al. 2008). For example, customers sent Sprint Nextel to the top of MSN Money's "Customer Service Hall of Shame" when it terminated contracts with 1,000 customers due to their low profitability (Srivastava 2007). Third, while information asymmetries may generally lead investors to be conservative in their valuations (e.g., Epstein and Schneider 2008), not all information if revealed by a firm may enhance investor valuations of the firm. For example, if investors believed some of a firm's customers were among its most valuable and a firm reveals that they are among its least valuable, then this may lead them to revise valuations downwards.

Thus, in the UCM context there are clearly downside costs and risks to firms' in revealing some types of information relating to the quality of its customer base and the firm's ability to generate cash flows from its customers. Furthermore, even if a firm decides to engage in UCM actions and not to publicly disclose this, it risks disclosure by affected customers. Signaling theory indicates that managers will evaluate the costs and benefits of revealing new information regarding the quality of the firm's customer base, ability to generate cash flows from it, and risks to it and only reveal such information when they believe that the expected benefits outweigh the anticipated costs and risks of doing so.

Key elements in any signaling framework to understand how and with what consequences such decisions may emerge can be categorized in terms of the signaler (the party revealing the new information); the signal (the information being revealed), the receiver (the party receiving/interpreting the signal and their response); and the signaling environment (the context in which all of this occurs) (Connelly 2011). We use these groupings to identify contingency factors that may affect investor reactions to UCM disclosures. Specifically, we argue that the net effect of UCM disclosures on investor (signal receiver) valuations will be contingent on the characteristics of: (1) the signal content i.e. the revealed UCM strategy; (2) the signaler, i.e., the firm concerned; and (3) the signaling environment surrounding the UCM

disclosure. These characteristics may impact firm value outcomes of UCM in different ways (both positive and negative), suggesting that a wide range of changes in firm value is likely. Figure 1 depicts the conceptual model for our study. We next derive hypotheses about the overall net effect of UCM disclosures on firms' stock returns.

– Insert Figure 1 Here –

The moderating role of UCM strategy (signal) characteristics

UCM strategies Two basic types of UCM strategies—direct and indirect—have been identified. In a direct UCM strategy, the firm takes specific actions to openly terminate its relationship with targeted low value customers without giving them an option to stay (Mittal and Sarkees 2006). This can be a fast and in direct cost terms, cheap-to-execute UCM strategy. However, it can also lead to significant indirect costs. For example, research has shown that direct customer divestment may both increase non-affected remaining customers' exit intentions and reduce the joining intentions of prospective new customers (Haenlein and Kaplan 2012). This may be a result of direct strategies being involuntary relationship terminations for affected customers, which can break psychological contracts and have traumatic effects (e.g., Montgomery et al. 2017). In addition, when experiencing such adverse outcomes, to avoid negative feelings about themselves customers tend to attribute them to external reasons (e.g., Pick et al. 2016) and may perceive the firm's actions as unfair. Behavioral research has shown that involuntary service termination hurts customer brand attitude and increases negative WOM and customer revenge (Haenel et al. in press, Lepthien et al. 2017). Thus, directly affected customers are likely to blame the firm, and may even take "revenge" by spreading negative WOM as a way of mitigating culpability, coping with anger and frustration, and protecting self-esteem to "restore justice" (Haenel et al. in press, Lepthien et al. 2017).

This may lead to a more negative investor interpretation of the UCM disclosure than with alternative indirect UCM strategies, harming stock returns for a number of reasons including

investors: (1) estimating that the total (direct and indirect) costs of such strategies in dealing with affected customers are likely to be higher; (2) viewing the risk of negative spillovers to other customers and prospective customers being higher, both increasing costs and risks to future cash flows; and (3) having expectations of potential damage to the firm's customer relationships that lower valuations of the firm's customer-related intangible assets.

In contrast, firms using an indirect strategy seek to improve low value customers' profitability or to divest them without sending explicit termination messages to affected customers or by providing them with options to continue the relationship (Haenlein et al. 2006). Three widely-used indirect approaches have been identified.[5] First, price increase, where a firm increases low value customers' relational costs (e.g., introduces customer service fees) so that they either switch suppliers or become more profitable (e.g., Zeithaml et al. 2001). Second, tiered services, where low value customers are switched to lower-cost service options to improve profitability (e.g., from financial advisors to call centers), often with the goal of ending the relationship (Mittal et al. 2008)—this strategy is also referred as service demotion or downgrading (Haenel et al. in press). Third, distancing, where the firm gradually reduces the strength of the relationship via firm behavior changes and reduced investment, such as decreased frequency of communication (e.g., Halinen and Tähtinen 2002). For example, retailers may stop sending catalogs or marketing offers to low value customers.

Adopting such indirect strategies may be a slower and more costly approach in terms of direct costs (since it involves new marketing actions) with respect to the affected customers. However, it may also result in lower indirect costs as affected customers are more likely to view the relationship change or exit as voluntary, leading to less negative emotions (Gassenheimer et al. 1998). In many cases, customers may not even notice the firm's role in any relationship

[5] While firms could use a combination of different strategies, we find only three such cases in our sample (all using both price increases and tiered-service). Excluding these firms does not affect our later hypothesis testing results.

changes (Haenlein et al. 2006). This should result in targeted customers having less negative feeling toward the firm and being less prone to negative WOM. In addition, since at least some proportion of the customers targeted by such indirect strategies are likely to remain customers of the firm they may become more profitable as a result of increased revenues and/or lowered costs-to-serve. Thus, indirect strategies may provide an avenue to increase future cash flows. To investors, this should reduce the likely total costs and risks associated with negative spillovers to other customers and prospective customers, enhance expectations regarding revenues and lower costs-to-serve for remaining affected customers, and lead them to be less likely to downgrade the value of the firm's customer-related intangible assets. Therefore, we expect that:

H1: Investor reactions to UCM disclosures will be less favorable in the case of firms adopting direct vs. indirect strategies.

Strategic intent The management literature suggests that corporate decisions such as UCM taken with a specific goal in mind should create more value (e.g., Montgomery et al. 1984). Studies have shown that abnormal returns to firms' strategic decisions depend on their intended goal, which investors use to help interpret their potential impact on firm value (Blackwell et al. 1990; Brickley and Van Drunen 1990). Investors will be more certain of the intended goal of UCM actions when this is made explicit by the firm. Two UCM goals may be particularly positively viewed by investors in this regard.

First, Wiles et al. (2012) suggest that investors respond more favorably when resources freed up by strategic actions are invested in areas in which the firm has more experience, as this is less risky and more likely to deliver positive returns. From this perspective, investors may be sensitive to such actions being designed to enhance the firm's investments in its core business—the aspects of its business that are most central to its business operations and provide the majority of its cash-flows (Wiles et al. 2012). Thus, if a firm engages in UCM intending to re-focus resources on their core business as a de-diversification effort (Varadarajan et al. 2001), this

may be interpreted by investors as a less risky (and therefore more valuable) use of any freed-up resources resulting from UCM. This suggests:

H2: Investor reactions to UCM disclosures will be more favorable for firms announcing the strategic intent of focusing their resources on their core business.

A second strategic intent for UCM that may be favorably received by investors is to free up resources for more profitable customers (i.e., customers with higher customer lifetime value; CLV) across the firm's businesses. Clearly, not all customers are equal in terms of their costs and benefits to the firm (Kumar and Shah 2009). In addition to profits on current sales, firms calibrating the CLV of their customers may include the potential to up-sell, cross-sell, and increase customers share of requirements that may contribute to all future profits from a customer over his or her life or relationship with a firm (e.g., Gupta et al. 2004). Providing a rationale for a UCM decision concerning releasing resources to invest in more profitable customers suggests that the firm is able to identify and calibrate customer-level profitability and that the resources generated will be spent on such higher potential customers. These may also include new customers that are targeted on characteristics manages believe indicate higher profit potential. In addition, investing more resources in high-value customers designed to increase their loyalty may also enhance expected cash flows. A strategic intent to focus on more profitable customers should therefore enhance investor perceptions that the firm is taking actions designed to enhance future profits and thus more effectively signal the likely level of, and risks to, future cash flows from the UCM decision (Wiles et al. 2012). Thus, we hypothesize:

H3: Investor reactions to UCM disclosures will be more favorable for firms announcing the strategic intent of focusing their resources on more profitable customers.

Voluntary disclosure Disclosing UCM actions voluntarily may signal managers' confidence in their firm's ability to accurately establish customer profitability and its willingness and ability to enhance performance by adopting actions designed to proactively deal with such customers.

Sending such voluntary signals also suggests that managers are less concerned that the UCM actions they are taking will provoke significant and costly negative responses from customers and prospective customers. Firms voluntarily disclosing customer divestments may also be expected to have lower associated PR costs than if it is later disclosed and reported by a third party (e.g., customers, press). Conversely, since the stock market is sensitive to signals of a firm's financial prospects, if UCM news emanates from a third party, it may be more likely to be interpreted by investors as a signal that the firm may have undisclosed problems associated with unprofitable customers (Chen et al. 2009). Moreover, if the value implications of a signal are mixed or ambiguous, investors are more likely to process the information as if the worst-case scenario is true (Epstein and Schneider 2008). Thus, we expect that:

H4: Investor reactions will be more favorable to voluntary than involuntary UCM disclosures.

The moderating role of firm (signaler) characteristics

Disclosures concerning firms' strategic decisions and actions such as UCM often convey ambiguous and complex information that is difficult for investors to interpret (Wiesel et al. 2012). Under such circumstances, investors are likely to use other firm characteristics as an informational lens in interpreting the value implications of UCM disclosures. We hypothesize that two firm characteristics may provide important informational lenses on UCM are marketing capabilities and prior performance.

Marketing capabilities Marketing capabilities reflect a firm's ability to use available resources to perform marketing tasks in ways that achieve desired outcomes (e.g., Feng et al. 2017; Morgan 2012). Firms with superior marketing capabilities vis-à-vis its peers are therefore able to achieve greater levels of desirable marketing outcomes for a given level of resource inputs. One of the most desirable outcomes of firms' marketing efforts is market-based asset such as

profitable customer relationships (Feng et al. 2015). When seeking to interpret new information with uncertain outcomes, investors often use other information to provide clues as to how to interpret the new signal. A firm's marketing capabilities is one such lens (Wiles et al. 2012). For example, a firm may engage in UCM because it has advanced CRM capabilities that allow it to accurately evaluate the value of its customer base and strong market research, pricing, service design, and marketing communications capabilities to be able to design and execute a range of UCM actions (Wang and Feng 2012). Alternatively, a firm may engage in UCM because it has a poor ability to identify and attract high-value prospective customers and needs to deal with the consequences of this inferior marketing capability.

Thus, a firm's marketing capability may be a useful lens through which investors can interpret otherwise ambiguous (at least with respect to likely cash flow outcome) information such as UCM disclosure. Investors should view a firm with strong marketing capabilities as being better able to accurately identify low value customers, successfully deal with such customers during any UCM actions, generate greater cash flows from its remaining customer base, and attract higher-value new customers. Because of the halo effect of organizational capabilities (e.g., Rosenzweig 2007), investors should also face less ambiguity in interpreting the implications of UCM decisions and actions when considering firms with strong marketing capabilities. Thus, we expect that:

H5: Investor reactions to UCM disclosures will be more favorable for firms with stronger rather than weaker marketing capabilities.

Prior performance Investors often use past performance as a referent in interpreting complex new information to infer its implications for firms' future performance prospects and asset value (e.g., Lee and Madhavan 2010; Reuer et al. 2012). In the case of UCM disclosures, investors may be expected to view new information concerning the firm's actions designed to deal with low value customers particularly positively when the firm had previously suffered from poor

performance. Such a signal may be interpreted as an indication that the firm is making changes designed to deal with the cause of the poor performance. Thus, investors may welcome positive actions such as UCM, and take it a sign that the firm has a strategy solution to its performance problems that may be expected to enhance future cash flows. Conversely, if a firm's prior financial performance has been strong, investors may be concerned that such new moves with respect to the firm's customers may be unnecessary or even harmful (why fix something that isn't broken?). It is even possible that investors could interpret such a move as an indicator that the firm's prospects are insufficient to meet current market expectations and that the firm is being forced to change its CRM approach as a result. We therefore hypothesize that:

H6: Investor reactions to UCM disclosures will be more favorable for firms with weak prior performance than for firms with strong prior performance.

The moderating role of (signaling) environment characteristics

The impact of disclosures of firms' strategic decisions on investor responses is also likely to be affected by the environment in which the firm's decisions are taken and investors receive the new information. Two aspects of the environment are likely to be particularly important in this regard.

Positive publicity This concerns the average positive sentiment expressed in news reports by a third-party news agency of the firm's UCM activity on the event day. For example, financial press reports about a firm's UCM moves may be positive and focus on the firm being "smart" in its business operations in how it is dealing with its lower value customers. This may reduce investor uncertainty regarding the likelihood that managers have underestimated the costs and risks of UCM strategies, and enhance expectations regarding the firm's future performance prospects. Positive publicity may also be viewed as additional signal to investors that the company has strong CRM capabilities, indicating that the firm has superior communication and

PR skills in dealing with low value customers. This should also lead investors to interpret the firm's UCM actions move positively both in terms of the likelihood of risks and costs to non-directly affected customers and in terms of the likely value of the firm's intangible customer relationship assets. Thus, we expect that:

H7: Investor reactions to UCM disclosures will be more favorable for firms when this receives positive publicity.

Media coverage This concerns with whether or not the UCM is covered in a major or national news outlet rather than a minor or local media outlet on the event date—i.e., the day the UCM is announced by the firm.[6] As it is easier for investors to interpret stronger than weaker signals, broader, national-level exposure of a firm's UCM disclosure may enhance the strength and credibility of any signal received by investors and augment the signaling effects (Connelly et al. 2011). In the context of UCM disclosures, broadcasting news of the firm's UCM actions in wider, national-level media may also signal the firm's confidence in its evaluation of customer profitability and ability to effectively and efficiently deal with its low value customers to enhance profitability. It may also be viewed by investors as signaling greater confidence on the part of the firm's managers that they are not overly concerned with potential negative backlash from affected customers and risk of negative spillovers to the firm's other customers and prospective customers. Thus, we expect that:

H8: Investor reactions to UCM disclosures will be stronger when the media coverage is broader.

Data and empirical context

We test our hypotheses using a sample of UCM disclosures involving publicly traded U.S. firms.

[6] All news media assessments were performed on the same day (event date) as the announcement. However, if an UCM announcement occurred after 4pm EST—closing of trading hours for the major U.S. stock markets—then, both the event date, as well as the news media assessments, were made on the immediately following trading day.

The data were collected from searches of news reports and announcements of UCM in Lexis-Nexis, Factiva, firm websites, and major business publications over a period of 26 years (1992–2017). Based on the literature and a sample of UCM news reports, the keywords used in the search were combinations including variations of: “unprofitable,” “low profit,” “high cost,” “low value,” etc. and “customer,” “client,” etc. with “drop,” “eliminate,” “fire,” “abandon,” “disinvest,” “distance,” “service tier,” “migrate,” “raise price”, etc., in different verb tenses and plural forms. The keyword list was updated whenever new terms were found in reports of UCM activities. We also conducted a broader search of multiple news sources to identify the earliest date when UCM disclosures emerged and kept only the earliest disclosure if multiple reports referred to the same event. Two independent coders identified the events, checked the earliest disclosure dates and coded the moderator variables from the news reports. Inter-coder agreement exceeded .87, with all disagreements resolved by discussion.

From the initial sample of 300 UCM disclosures identified, 52 were removed because key data was unavailable. Any UCM disclosures made during analyst or earnings calls were then excluded, since they typically also include other confounding news concerning the firm’s expected future financial performance. We also checked for concurrent events (e.g., earnings announcements, new product releases, mergers and acquisitions, lay-offs, lawsuits, stock splits, spin-offs, dividends, key executive changes) within a two-day window around the UCM disclosure date (McWilliams and Siegal 1997). We found 56 instances of such confounding disclosures and removed these events from the sample. The final sample therefore comprised 192 “clean” disclosures that clearly reflect UCM decisions by 113 publicly traded firms from 30 industries. The largest groups of firms are from industries categorized as finance, insurance, and real estate (SIC 60-67) (n = 92) and transportation, communications, and utilities (SIC 40-49) (n = 47). Other industries include manufacturing (SIC 20-39) (n = 23), wholesale and retail (SIC 50-59) (n = 12) and services (SIC 70-87) (n = 13). The top three industries in our sample are

banks (SIC 60, n = 37), insurance (SIC 63, n = 34), and communications (SIC 48, n = 30).

Method, measures, and analyses

Event study methodology overview

Our measure of shareholder value is the short-term abnormal returns accruing to the firm from UCM disclosures, using the event study method which has been widely used to capture stock market reactions to a firm's marketing actions (Sorescu et al. 2017). Event studies test the impact of an unexpected event on stock prices based on the efficient-market hypothesis that all publicly available information is reflected quickly and completely in the stock price without bias. Thus, only new and unanticipated information leads to changes in stock price, which reflect anticipated changes in the future cash flows for a firm adjusted for time and risk, and re-valuations of the firm's assets.

The short-term event study methodology is appropriate for testing the impact of UCM actions on shareholder value for two reasons. First, this method can be used to analyze the impact of any unanticipated event on stock returns. While firms may engage in UCM actions privately, when such activities become public—either because firms choose to disclose it or because it becomes known for reasons outside the firm's control—it will be a surprise to investors, who will use the new information to update their assessment of firm's future cash flows levels and risk, as well as the firm's residual asset value. This expectation adjustment will be quickly reflected in the firm's stock price. Second, similar strategic actions in marketing (e.g., CRM outsourcing, firing advertising agencies, brand disposal) (Kalaignanam et al. 2013; Kulkarni et al. 2003; Wiles et al. 2012) and management and finance (e.g., layoffs, firing key executives) (Chen et al. 2001; Worrell et al. 1993) have been investigated using short-term event studies to assess their shareholder value impact. In later robustness checks we also verify the

alignment of these effects with longer-term effects.

Measures

All measures used to test our hypotheses are discussed below and summarized in Table 3.

Abnormal stock returns Our dependent variable is the firm's abnormal return (AR) associated with a UCM disclosure. The impact of a UCM disclosure on a firm's stock price is assessed by computing the difference between the observed return R_{it} on the event date and the expected returns $E(R_{it})$ estimated in a benchmark model using the Fama-French-Momentum model (Carhart 1997; Fama and French 1993).

(1) $$E(R_{it}) = \hat{\alpha_i} + \hat{\beta_i} \cdot R_{mt} + \hat{\gamma_i} \cdot SMB_t + \hat{\delta_i} \cdot HLM_t + \hat{\sigma_i} \cdot UMD_t$$

where R_{it} is the return for stock i on time t; R_{mt} is the stock returns of the benchmark market portfolio at time t; SMB_t is the difference between the rates of return of small and large firms; HML_t is the difference in returns between high and low book-to-market ratio firms; UMD_t is the momentum factor, defined as the difference in returns between firms with high and low past stock performance; and $\hat{\alpha_i}$, $\hat{\beta_i}$, $\hat{\gamma_i}$, $\hat{\delta_i}\cdot$ and $\hat{\sigma_i}$ are the parameter estimates obtained by regressing R_{it} on the four factors. We estimated the parameters of the Fama-French-Momentum model for each firm, calculating a firm's abnormal returns (AR) as:

(2) $$AR_{it} = R_{it} - E(R_{it}) = R_{it} - (\hat{\alpha_i} + \hat{\beta_i} \cdot R_{mt} + \hat{\gamma_i} \cdot SMB_t + \hat{\delta_i} \cdot HLM_t + \hat{\sigma_i} \cdot UMD_t)$$

where the abnormal return AR_{it} is the difference between the stock's observed returns R_{it} and its expected returns $E(R_{it})$, which is a function of the rate of return of the benchmark market portfolio (Fama-French-Momentum model) R_{mt} at time t. Following standard practice (Robinson et al. 2014; Wiles et al. 2012), we use the AR on the event day in our hypothesis testing analyses as it is the largest and most significant in the [0,0] window.

Independent variables and controls Many of these variables are coded from announcements and reports by two independent coders with marketing research backgrounds, using a standardized coding scheme (see examples in Web Appendix W1). Inter-coder agreement was high (>.85) and all inter-coder disagreements were discussed and resolved.

UCM strategy (Signal) characteristics Firms' UCM strategy approach (e.g., direct, price increase, tiered service, and distancing), strategic intent (e.g., focus on customers in core business, serve more profitable customers, respond to new regulations affecting relative value of some customers), and disclosure voluntariness are coded from reports, as detailed in Table 3. In addition to the above UCM signal characteristics about which we develop formal hypotheses, we also include some additional signal characteristics to control for the additional variance that they may explain in investor responses to UCM disclosures. First, the number of affected customers, since the greater the number affected, the stronger the effect that may be observed. Second, the intended target of the firm's UCM actions (i.e., whether individual customers are the target vs. whole segments of customers), given the potential for perceived unfairness from the individual customers targeted, we expect this approach to result in the most negative effect. Third, the stage of UCM indicated in the disclosure (i.e., whether the actions are still in the planning stage, ongoing, or have already been implemented)—given the certainty associated with ongoing disclosures, we expect these to have the most negative effect.

UCM disclosing firm (signaler) characteristics We assess a firm's marketing capabilities as its ability to use available resources to create market-based intangible asset value, using an input-output approach (Dutta et al. 1999). Following Wiles et al. (2012) we estimate a stochastic frontier estimation (SFE) model in which the resource inputs are a firm's SG&A and Advertising expenditures at year t and t-1 (from Compustat) and the number of trademarks owned (from the

U.S. Patents and Trademarks Office database), while the output is the firm's ability to create market-based relational assets, indicated by the proportion of the firm's intangible asset value of the firm (Tobin's Q) not accounted for by its technology (R&D investments and number of patents), management quality (relative TMT compensation) and industry membership (see Appendix E in Feng et al. 2015 for details).

In terms of other firm characteristics, the firm's prior performance is measured as Tobin's Q[7] in the previous year t-1. UCM frequency (the number of a firm's prior UCM disclosures) was counted from news reports. While we assume that firms adopt UCM strategies when managers believe that their costs outweigh their benefits, to capture any additional signals we also code whether or not customer profitability knowledge is explicitly indicated in any UCM disclosure from announcements and news reports.

We also include other firm-level covariates that may influence shareholder value. First, the frequency of the firm's UCM disclosures, which may signal the firm's UCM experience. Given that more frequently disclosed information may also provide less incremental "unexpected" information, they are likely to have less of an effect on investor responses (Warren and Sorescu 2017). Second, indications of the firm's customer profitability knowledge may provide an additional lens through which investors may view information UCM disclosures to determine if the firm has strong CRM capabilities. Third, the size of the firm, proxied via its assets, is often used in academic studies as an indicator of firm resources and may be similarly used as by investors as an indicator of the firm's ability to successfully deal with unprofitable customers. Fourth, the literature suggests that a firm's financial leverage and recent stock performance are indicators of the firm's ability to raise capital and therefore provides information concerning a firm's assess to financial resources needed to identify and select the

[7] Alternative indicators of prior performance such as ROA, sales growth, and margin growth produce essentially the same hypothesis testing results.

preferred options to implement UCM. Jointly, these variables may provide an additional lens that helps investors interpret disclosures concerning a firm's UCM actions.

UCM disclosure (signaling) environment characteristics Positive publicity is coded from analysis of any sentiment evident in news reports of the disclosure.[8] Media coverage is coded as whether or not the disclosure is mentioned in mainstream national press outlets such as the New York Times on the UCM announcement day, as detailed in Table 3. To control for the potential effect of other differences in the environment in which the firm operates and the UCM disclosure is revealed, we also control for time and industry effects in the model. First, we control for UCM activity cycle, i.e., the relative frequency of UCM activity across all firms to capture temporal variance in business cycle. When this is above average then UCM disclosures may be expected to receive less attention from investors and therefore result in weaker effects. Second, we control for the general industry-type (B2C vs. B2B, services vs. goods) and specific industry (SIC) in which a firm operates, as a firm's industry environment may also provide an additional lens for investors to interpret UCM. Firms in certain industries (e.g., B2B and goods) may suffer less from risks of revenge and "backlash" as customer relationships are often based on supply contracts that are renegotiated periodically. Conversely, UCM disclosures from firms in B2C and service industries are more likely to be received less favorably by investors.

Descriptive statistics and correlations for each of the variables in the hypotheses testing regression analyses are summarized in Tables 4 and 5.

– Insert Tables 3, 4 and 5 Here –

Event Study Analysis

We follow standard protocols for short-term event studies and calculate the abnormal

[8] This captures reporter sentiment reflected in the news report. Both human coded sentiment and text-analysis software (LIWC) derived sentiment from the news in window [0,0] yielded similar results in our analysis.

returns to UCM disclosures in Eventus® using the Fama-French-Momentum model as the benchmark, estimated over a 255-trading-day estimation window ending 46 days before the event. We also control for cross-sectional correlation in abnormal stock returns by using the time-series standard deviation test statistic (Brown and Warner 1980).

Heckman two-stage analysis to control for selection bias

A potential problem in our sample is selection bias, i.e., we can observe UCM activities only when they become public and are unable to observe and include in our sample firms that either take UCM actions in private or firms that did not engage in UCM actions at all, as such decisions could be endogenous. To control for these potential selection bias problems, we use a two-stage Heckman (1979) procedure using likely predictors of UCM actions (detailed below) to estimate the probability that a firm has engaged in UCM and then include this probability as a control in our hypothesis testing model. All descriptive statistics and correlations for variables in the first stage analyses are presented in Web Appendix W3 and W4.

Profitability[9] The literature indicates that a major reason that firms decide to engage in UCM actions is low customer profitability (Mittal et al 2008, Haenel et al. in press). Thus, a firm is more likely to engage in UCM when its profitability is low. We use a firm's prior year margin, operationalized as (SALES-COGS)/SALES from Compustat to calculate firm profitability.

Slack We also include firms' prior year resource slack, as this has been shown to affect returns to firms' market-based asset investment and divestment decisions (e.g., Bahadir et al. 2008; Habel and Klarman 2015). Firms with slack resources are more likely to keep a large customer

[9] Alternate measures of profitability including gross profit, net income and earnings produce essentially the same hypothesis-testing results.

base regardless of their profitability, while firms lacking such resources will face more pressure to enhance customer profitability by serving only higher value customers (Shin et al 2012). We use a firm's prior year current assets/current liabilities to indicate resource slack.

Capacity constraints Firms may also take UCM actions due to capacity constraints such as insufficient employees and assets to serve all their customers (Mittal et al 2008, Haenel et al. in press). When facing such constraints, lower value customers may be viewed as a drain on firm resources. As a result, firms with limited resources to serve existing customers are more likely to drop or lower resources dedicated to serving less profitable customers. Therefore, we include a firm's prior year sales/assets relative to industry average to proxy its capacity constraints.

Firm size Larger firms have more bargaining power over customers and are better able to afford to lose some customers, increasing the likelihood of customer divestments and other UCM actions. They are also better able to lose customers without significantly reducing economies-of-scale. We use prior year total assets to measure size.

Concentration Firms in concentrated industries are more likely to be willing to bear the costs and risks of UCM actions, as they have greater power over customers who have fewer alternatives. Firms in such industries should be less worried about customer reactions and negative consequences when taking UCM actions. We measure concentration as the prior year Hirschmann-Herfindahl Index (HHI) in the firm's primary SIC business segment.

UCM activity cycle We also include UCM activity cycle (i.e., whether there are more than the average number of UCM actions disclosed in the sample in a given year) to account for any temporal variance (differences in business cycle, competitive context, and other unobserved time

fixed effects) that may influence UCM disclosures. In years with above average incidence of UCM disclosures, firms are more likely to engage in UCM as they may follow the example of other firms and worry less about possible negative consequences.

UCM prevalence Finally, we include UCM prevalence in an industry as an exclusion restriction, because an industry's proclivity towards UCM actions and disclosures should affect the likelihood that a firm engages in UCM, but it does not influence the individual firm's stock performance. UCM prevalence is measured as the number of other firms that disclose UCM activities in the same industry, divided by the total number of other firms in the industry.

Including these predictors in the first-stage probit model (Equation 3), we estimate the probability that a firm engages in UCM in a given year in a sample including both focal firms that engage in UCM and a matched sample of public firms with similar characteristics that did not disclose UCM activities. The matched sample comprises firms that share the same industry membership (two-digit SIC) and year with each focal firm in the Compustat database, further screened to identify firms whose total assets, price-to-book, and margin are all within ±50% of those of the focal firm. Two-group t-tests show no significant difference between the focal UCM sample and the matched sample in these variables. The probit model is then applied to the sample of focal and matched firms with the dependent coded as 1 if a firm discloses UCM activities in year t, and 0 otherwise, and ζ_{it} is an error term.

$$(3)\ UCM_{it} = \alpha_0 + \alpha_1 \bullet Profitability_{i(t-1)} + \alpha_2 \bullet Slack_{i(t-1)} + \alpha_3 \bullet Capacity\ Constraints_{i(t-1)} + \\ + \alpha_4 \bullet Firm\ Size_{i(t-1)} + \alpha_5 \bullet Concentration_{i(t-1)} + \alpha_6 \bullet UCM\ Activity\ Cycle_{it} + \\ + \alpha_7 \bullet UCM\ Prevelance_{it} + \zeta_{it}$$

Using equation (3), we also estimate the inverse Mills lambda, which is then included as a regressor in the second stage hypothesis testing model (Eq. 4) to control for any systematic differences between firms with and without UCM disclosures. To test our hypotheses H_1-H_8,

which are conditional on the UCM decision having already been made, we estimate a regression model of the determinants of ARs estimated on the sample of UCM disclosures only:

$$
\begin{aligned}
(4)\ AR_{[0,0]it} = {} & \beta_0 + \beta_1 \bullet \text{UCM Strategy}_{it} + \sum_{k=1}^{3} \beta_{2k} \bullet \text{Strategic Intent}_{kit} + \\
& + \beta_3 \bullet \text{Voluntary}_{it} + \beta_4 \bullet \text{Affected Customer Size}_{it} + \beta_5 \bullet \text{UCM Target}_{it} \\
& + \beta_6 \bullet \text{UCM Stage}_{it} + + \beta_7 \bullet \textit{Marketing}\ \text{Cap}_{it} + \beta_8 \bullet \text{Performance}_{i(t-1)} \\
& + \beta_9 \bullet \text{UCM Frequency}_{it} + \beta_{10} \bullet \text{Customer Profitability Knowledge}_{it} \\
& + \beta_{11} \bullet \text{Firm Size}_{i(t-1)} + \beta_{12} \bullet \text{Firm Leverage}_{it} + \beta_{13} \bullet CAR_{[-30,-2]it} \\
& + \beta_{14} \bullet \text{Positive Publicity}_{it} + \beta_{15} \bullet \text{Media Coverage}_{it} + \beta_{16} \bullet \text{UCM Activity Cycle}_{it} \\
& + \beta_{17} \bullet B2C_{it} + \beta_{18} \bullet \text{Service}_{it} + \beta_{19} \bullet \textit{Mills}\ \lambda + \beta_{20} \bullet \text{Industries Dummies} + \mu_i + \varepsilon_{it}
\end{aligned}
$$

where $AR_{[0, 0]}$ is the abnormal stock returns on the event day [0, 0] for the stock i; to control for unobserved heterogeneity we include time-invariant firm-specific error terms μ_i, while ε_{it} are regular error terms. We control for heteroscedasticity using firm-clustered robust standard errors.

Results and discussion

Main effect of UCM disclosures on shareholder value

We first computed cumulative abnormal returns (CARs) for event windows around the UCM disclosures, beginning five days before and ending five days after the disclosures and tested their significance (Table 6A). The most significant ARs are on the event day [0, 0], and we find no evidence of information leakage (all pre-event ARs are non-significant). Divestment studies commonly center on the announcement date [0,0] window (King et al. 2004) as the efficient market hypothesis suggests that stock prices adjust quickly to new information about firms' activities (Wright and Ferris 1997) and it avoids potential noise introduced when using longer windows (Kothari and Warner 2007). Consistent with standard practice (McWilliams and Siegel 1997), we therefore focus on the disclosure date window [0,0] for the remaining analyses as the AR is the largest and most significant on the event day. All statistical tests are two-tailed.

Our findings indicate that on average UCM disclosures are associated with a significant negative AR (-.53%, $p < .01$)[10] on the event day using the portfolio time-series standard deviation test (CDA) which corrects for potential cross-sectional correlation of stock returns (Brown and Warner 1980). Thus, we find that UCM disclosures quickly lead to a one-time adjustment in investors' valuation of the firm's stock and that on average this adjustment is downward and significant. However, the fact that this happens only on the UCM disclosure event day should not be interpreted as meaning that the affected firm's stock value quickly returns to its previous level (i.e. the stock price does not "rebound" and the effect "disappear"). Rather, following the one-time adjustment to a UCM disclosure, the firm's stock price then subsequently moves from that new level in line with investors' expectations based on the firm's fundamentals and those of the rest of the stock market.

The magnitude of the ARs to UCM disclosures observed is consistent with those for other marketing actions (e.g., Chen et al. 2009; Wiles et al. 2012). Our estimates also indicate the economic significance of UCM disclosures. With an average market capitalization in our sample of $37.74B, the AR estimate (-.53%) equates to a $200M loss in shareholder wealth. Thus, the impact of UCM is clearly of economic as well as statistical significance.

– Insert Tables 6A and 6B Here –

Hypothesis testing in cross-sectional analyses

We test our hypotheses by estimating Equation 4 with the UCM disclosure AR in window [0, 0] as the dependent variable using regression analysis. Variance inflation statistics suggest no multicollinearity issues in our models. The Heckman first-stage selection model estimates are summarized in Table 7; all but one of the coefficients in the first-stage selection model are significant, showing that these are good predictors for a firm's engagement in UCM

[10] The AR is still negative and significant (AR= -.61%, $p < .05$) for the sub-sample of direct divestment (n=112).

activities. In addition, the count R-square shows that the selection model correctly classifies 75% of all UCM actions. The second-stage hypotheses testing estimates are summarized in Table 8.

– Insert Tables 7 and 8 Here –

In Table 8, the UCM disclosure (signal) characteristic estimates show that those revealing direct UCM strategies result in more negative ARs than those of indirect UCM strategies (β = -.010, $p < .05$), supporting H1. We also find the strategic intent of a firm's UCM is important, with those doing so to focus available resources on either on their core business (β = .025, $p < .01$) or to serve more profitable customers (β = .015, $p < .05$) being associated with more positive returns. Thus, both H2 and H3 are supported. However, results suggest that voluntary (versus involuntary) UCM disclosure does not affect resulting returns, providing no support for H4 (β = -.007, $p > .10$). Other types of UCM strategic intent such as to comply with new government regulations do not impact firm value. None of the remaining disclosure-related controls—number of affected customers, UCM target (individual customers vs. a segment of customers, etc.), and stage of UCM strategy (planned, in process, completed—are significant.

Regarding firm (signaler) characteristic contingencies, we find that marketing capabilities have a significant positive impact on ARs to UCM disclosures (β = .003, $p < .01$), supporting H5. This is consistent with our argument that investors will view UCM more positively if they have greater confidence in the firm's marketing expertise. In addition, we find support for H6, indicating that investors view weak (versus strong) prior performance as signaling that a firm's UCM actions are designed to solve its performance problems and enhance future cash flows (β = -.007, $p < .01$). Among the associated firm controls in our model we find that neither firm size nor a firm's explicit knowledgeability of customer profitability impact firm value changes following UCM disclosures. However, we do find that both firm leverage and prior stock performance positively predict ARs to UCM disclosures. The latter result is consistent with the general notion that stock prices have "momentum" (e.g., Acharya 1993; Fama 1998). We also

observe that the more frequently a firm engages in UCM leads investors to respond more positively to a UCM disclosure, suggesting that it may signal the firm's UCM experience and expertise, reducing investor worries regarding the likely associated costs and risks.

Regarding the signaling environment in which UCM disclosures occur, our findings reveal that while broader media coverage itself is not significant, we find a significant positive coefficient for positive publicity ($\beta = .026$, $p < .01$), indicating that firms whose UCM disclosures generate positive media sentiment enjoy more positive stock returns. These results support H7 but not H8. Among the signaling environment controls, we find that firms operating in B2B industries achieve more positive returns from UCM than those in B2C industries ($\beta = -.009$, $p < .05$) but the remaining industry and time controls are not significant.

The Mills lambda estimates are non-significant across all model specifications. Given the high predictive value of our first-stage Heckman model, this indicates that any selection bias introduced by our inability to include in our sample UCM observations that are never publicly disclosed does not materially affect our findings.

Robustness checks

We examine the stability of our results using ARs based on three alternative benchmark models: the Fama–French-three-factor, market, and market-adjusted returns models. Correlation coefficients between ARs from these three models and those from the Fama-French-Momentum model employed are .99, .97, and .95, respectively, and main effect and hypothesized relationship results in all three alternative models remain unchanged (see Web Appendix W2). Our findings also remain unchanged when we utilize alternative windows (i.e., 260 to 10 days prior to event) to calibrate abnormal returns. These tests confirm the robustness of our findings.

To deal with the possibility that a firm's UCM actions may take place over a relatively long time period and investors be unable to completely discern the economic value implications

of UCM disclosures and impound these quickly into the stock price—or that UCM disclosure information may diffuse only gradually—we also investigate the long-horizon ARs. Overall, long-term abnormal returns associated with an event typically indicate investor mispricing–i.e., when investors are unable to fully discern and price UCM disclosures (Wiles et al. 2010). We test for the significance of post-disclosure long-term ARs using two established finance methods: buy-and-hold abnormal return (BHAR) and calendar time portfolio (CATP).

The BHAR methodology generates annual returns by compounding monthly returns for which the stocks are held and compare these to those of reference portfolios. Thus, the returns of UCM disclosure event firms, held for a period of time (e.g., a year) after the event, are benchmarked against the returns of a matched sample of similar but non-UCM disclosing firms to assess the abnormal performance associated with the event (Sorescu et al. 2017). The bootstrapped adjusted standardized cross-sectional test (Kolari and Pynnonen 2010), which addresses the cross-sectional dependence problem, shows that ARs are negative but non-significant over the 6-month ($z = 1.174$, $p = .085$), 12-month ($z = .978$, $p = .191$), 24-month ($z = .978$, $p = .164$) and 36-month ($z = .976$, $p = .169$) post-disclosure period, using both the control-firm and size-decile-matched portfolio method.

The second approach is CATP analysis which aggregates event firms into portfolios whose ARs are measured over a long period, eliminating the problem of cross-sectional dependence among firms (Sorescu et al. 2007). Abnormal return over the post-event months is assessed by the significance of the estimated intercept (alpha) of these monthly portfolio returns in a multifactor regression. We find the intercept is not significant for 6-month (alpha = .000, $t = .000$), 12-month (alpha = .002, $t = .390$), 24-month (alpha = .002, $t = .600$) and 36-month (alpha = .002, $t = .810$). The results of both analyses suggests that UCM disclosures do not lead to long-term investor mispricing, confirming that the effect of UCM disclosures is completely impounded into stock value on the UCM disclosure day—i.e., it is a short-term effect. Overall,

these analyses are aligned with the signaling theory lens used to investigate UCM disclosures, since investors appear able to fully decipher (and price) the signal(s) provided by the UCM disclosures in the very short term (i.e., the event date/day).

Post-hoc analyses

Although Table 8 results show that an indirect (vs. direct) UCM strategy produces more positive returns to UCM disclosures, this does not reveal which indirect UCM strategy approach may be most positively received by shareholders. To explore this, we replaced the direct strategy dummy in Table 8 with the three different indirect strategies (price increase, tiered services, and distancing) to evaluate the impact of each on shareholder returns. We find that firms have more positive ARs when adopting distancing ($\beta = .016$, $p < .05$) UCM approaches than the price increase or tiered service approaches, which while directionally positive are both insignificant. Both price increases and tiered services are likely to be communicated to affected customers (or will at least be recognized by them), suggesting that investors view more "disguised" UCM approaches as a less costly and risky way to deal with low value customers.

Finally, to enhance understanding of the mechanism suggested in our conceptual arguments regarding how and why UCM may lead investors to change their valuation of a firm's stock we examined firms pre- and post-UCM disclosure performance in our sample. Specifically, we compared the average sales revenue and net margin growth, cash flow, and price-to-book (P/B) performance of these firms for the eight quarters before and after the disclosure. Margin is an indicator of the average profitability of the firm's customers, revenue growth indicates the firm's ability to use resources to attract and generate sales from customers, cash flows capture the upside benefits minus downside costs of firms strategic actions, while P/B indicates investors' valuation of the firm's intangible assets and proxy their growth expectations. We computed the average performance for the entire sample and for two sub-groups—firms that

exhibit a positive AR and those that exhibit a negative investor response to the UCM disclosure.

Table 9 shows that on average while firms' cash flows and margins rise after UCM disclosures, sales growth slows significantly, and there is no change in their intangible asset relative to book value. However, these averages mask significant differences between firms with positive vs. negative ARs to UCM disclosures. Table 9 shows that positive UCM AR firms grow both margins and cash flows during the eight quarters after UCM disclosures, while those with negative UCM ARs fail to grow cash flows and suffer margin dips and reduced sales growth. This suggests that changes in investor stock valuations in UCM disclosure events may be driven by expected cash flows, margins, and revenue growth rather than a re-valuation of the firm's intangible assets. The differences between positive and negative AR firms are also consistent with our proposed investor valuations of expected margin (benefits), revenue (potential risks and benefits), and overall cash flows (benefits minus costs) of engaging in UCM. The results are also consistent with stock market efficiency in valuing UCM disclosures in the short term.

– Insert Table 9 Here –

Implications for theory and practice

Our study has a number of implications for marketing theory and practice. First, we provide new insights into a neglected aspect of CRM from the investor perspective—dealing with low value customers. The theoretical CRM literature and simulation studies advocate that when firms calibrate the profitability and lifetime value of their customers they should then adopt UCM approaches designed to either raise the profitability of lower value customers or to divest them. Importantly, the CRM literature generally assumes that such UCM actions will either improve these customers' profitability or simply remove the revenues and costs of serving them from the firm's income statement. Our theorizing and findings from an investor perspective indicate that this assumption is crucially incomplete in (at least) two respects that may lead to underestimating

UCM's execution costs and risks and overestimating its revenue benefits.

From a cost perspective, since many UCM approaches run the risk of negative reactions from directly affected customers—and these may also affect other customers and prospective customers in ways that raise the costs of attracting and managing customers to generate revenue—our results support prior experimental work from the customer perspective in indicating that the CRM literature and many managers may underestimate the costs involved in executing UCM strategies. As a result, even though UCM strategies may be designed to lower the costs associated with serving the firm's least profitable customers, the total direct and indirect costs involved with implementing UCM in practice may be higher than anticipated and significantly reduce its margin benefits. The gross margin growth descriptives in Table 9 suggest that UCM can lower firm costs in ways that increase margins, but that for many firms reduced costs do not exceed the total direct and indirect costs involved, resulting in lower margin growth. Our AR results indicate that investors are sensitive to these UCM cost differences across firms and reflect their anticipation of such costs in their valuation of firms engaging in UCM.

From a revenue perspective, given the often relatively small number of directly affected customers, depending on the UCM strategy adopted by the firm the lost revenue from divested customers and/or increased revenue from any price increases paid by remaining customers may lead to relatively small effects on firms' overall revenue. As a result, in evaluating the firm value implications of UCM, investors are generally more interested in the risks that UCM actions pose for revenues from non-directly affected customers and prospective customers. The descriptive statistics in Table 9 provide support for the general notion that most firms are unlikely to significantly increase revenue as a result of engaging in UCM. Our AR results are also consistent with investors being attuned to differences between firms with respect to their ability to avoid revenue growth dips as a consequence of their UCM efforts.

This study also provides new insights into the performance consequences of alternative

UCM strategies. We show that indirect UCM approaches significantly reduce negative investor responses to firms' UCM actions. In combination with the impact of positive publicity we observe, this suggests investors are acutely aware that direct customer firing is likely to produce negative demand outcomes and may also involve costs that can outweigh any anticipated short-term average customer profitability gains. Further, we find that among different indirect strategy approaches suggested in the normative literature, divesting unprofitable customers via distancing approach is most favored by investors. As the only UCM approach of which customers may be completely unaware, this would seem to have the least risk of all UCM approaches.

For managers, our study offers a number of clear and actionable new insights. First, managers should be deliberative and careful in examining the potential costs and benefits of any UCM actions. In particular, the risks of negative reactions from targeted customers and the potential for these to affect other customers and prospective customers should be fully explored and factored into any cost-benefit considerations of planned UCM strategies. Our results indicate that these risks may be particularly germane in B2C industries, and may be easier for firms with greater UCM experience and stronger marketing capabilities to calibrate and manage.

Second, if after careful cost-benefit consideration, adopting a UCM strategy is deemed preferable to alternative actions, managers should seek to design and implement UCM strategies that minimize the risks of negative responses from affected customers. Our findings show that indirect UCM strategies are the most likely to be viewed positively by investors. These UCM approaches offer affected customers a continuation choice such as accepting lowered service levels or paying higher fees, in any decision to terminate their supplier relationship. Such indirect approaches are less likely to create feelings of abandonment among affected customers that could generate negative WOM and bad publicity. Our results show that from this perspective, the strategy of distancing is the most promising indirect UCM strategy option. Clearly, our results show that direct strategies of "firing" customers should be avoided whenever possible.

Third, we find that investor responses to firms' UCM actions are affected by their strategic intent and positive publicity for the firm's moves. Thus, managers should detail the objectives of any UCM plans discussed in forums such as analyst calls, particularly when the firm plans to use any resources freed up to focus on customers in its core business and/or more profitable customers. If the firm's UCM actions are to be disclosed more broadly, managers should create a messaging strategy focused on the benefits of the firm's actions for shareholders, and the firm's experience and ability to successfully execute planned UCM moves. This may also enable the firm to generate positive publicity for its UCM approach. Framing any UCM messaging around the strength of the firm's marketing capabilities may also be a useful way to provide investors with confidence that the firm can deliver on its strategic UCM intent.

Limitations and future research

A number of limitations must be borne in mind in interpreting our results that may also provide opportunities for future research. First, although event studies are widely used in examining investor responses to marketing actions, it does not explain the mechanism underlying why the observed relationships exist. We propose conceptual arguments for our hypothesized model that is consistent with our results and additional descriptive analysis, but we were not able to directly test this mechanism. Future research could further explore the underlying mechanism by using other methods, such as case studies, investor surveys and experiments. Second, given the information demands of our analysis method we were only able to test the impact of UCM for publicly-traded firms. While our sample covers a broad range of different types of firms, we cannot be certain that our results generalize to private firms. Third, while we capture firms' overall marketing capabilities—of which CRM capabilities is conceptually a sub-set—we do not have any direct indicators of the firm's CRM capabilities (Wang and Feng 2012). Future

research with access to more firm-specific CRM data would help verify this aspect of our findings.

In addition, our study reveals a number of fruitful new avenues for future research. Three of these are of particular theoretical and managerial interest. First, our results show that investors often view the downside costs and risks of firms' UCM as outweighing its benefits. While at an aggregate-level our post-hoc financial performance data suggests that investors are generally right in this expectation, we are unable to directly observe the direct and indirect costs of UCM. Studies adopting other research approaches may be able to calibrate these costs. The literature suggests that these may include lost sales from abandoned customers; negative image spillovers affecting demand from existing and prospective new customers; and direct UCM program implementation costs, such as communicating with customers, possible compensation for affected customers, and designing and delivering new service-level packages and/or pricing. What are the relative levels of these different UCM costs? What (if any) industry, firm, and customer-level characteristics affect these costs? Insight into such costs would contribute to the scant CRM literature on this subject and provide new insights regarding when and how to manage low value customers in ways most likely to enhance firm value.

Second, our results show the firm-level impact of negative reactions from customers to firms' UCM actions such as relationship termination. While indirect UCM approaches may minimize or limit such reactions, these approaches also have downsides in terms of execution costs and speed. Are there ways in which direct UCM approaches can be framed or executed that may reduce customers' negative responses? Can firms' communications with existing customers addressing their UCM actions also be framed in ways that reduce the brand/reputation impact of any UCM action affected customer backlash? Behavioral research on these questions may provide useful new insights for managers.

Third, given our findings indicating the generally negative stock market reactions to

disclosures of firms engaging in UCM, it is clearly advisable that managers should find better ways to predict which prospective customers may be unprofitable or relatively low value before they target them. How can this best be accomplished? Much CRM research attention has focused on which customers to target with cross-selling (e.g., Li et al. 2011), and how to match customers to different channels (e.g., Kumar 2010), and general marketing mix interventions (e.g., Rust and Verhoef 2005), but these are all after they have become customers and the firm has access to customer behavior and profitability data. What factors and data can firms use to better predict the likely profitability of prospective customers? What is the relative value of the ability to do so vs. other CRM capabilities?

Conclusion

As firms are increasingly discovering that a substantial share of their customers are unprofitable, many are considering or engaging in UCM strategies such as customer divestment. Yet, while we have a growing understanding of the performance impact of the customer acquisition and retention stages of CRM, it is unclear how low value customers can best be managed and whether divesting them is a good idea. Our research shows that investors frequently view the costs and risks of UCM as outweighing the benefits—and that direct "firing" of low value customer strategies are generally associated with particularly strong negative abnormal returns. However, superior marketing capabilities, positive publicity about UCM disclosures, strategic intent in UCM (focusing on the core business, serve more profitable customers), and use of the distancing strategies may enable firms to mitigate the negative effect of UCM and enjoy more positive abnormal stock returns as a result.

References

Acharya, S. (1993). Value of latent information: alternative event study methods. Journal of Finance, 48(1), 363–385.

Bahadir, S. C., Bharadwaj, S. G., & Srivastava, R. K. (2008). Financial value of brands in mergers and acquisitions: is value in the eye of the beholder? Journal of Marketing, 72(6), 49–64.

Bayer, E., Tuli, K. R., & Skiera, B. (2017). Do disclosures of customer metrics lower investors' and analysts' uncertainty but hurt firm performance? Journal of Marketing Research, 54(2), 239-259.

Berger, Philip G., and Rebecca N. Hann (2007), "Segment Profitability and the Proprietary and Agency Costs of Disclosure," The Accounting Review, 82 (3), 869–906.

Blackwell, D. W., Marr, M. W., & Spivey, M. F. (1990). Plant-closing decisions and the market value of the firm. Journal of Financial Economics, 26(2), 277–288.

Bonacchi, M., Kolev, K., & Lev, B. (2015). Customer franchise—A hidden, yet crucial, asset. Contemporary Accounting Research, 32(3), 1024-1049.

Brickley, J. A., & Van Drunen, L. D. (1990). Internal corporate restructuring: an empirical analysis. Journal of Accounting and Economics, 12(1-3), 251–280.

Brown, S. J., & Warner, J. B. (1980). Measuring security price performance. Journal of Financial Economics, 8(3), 205–258.

Carhart, M. M. (1997). On persistence in mutual fund performance. Journal of Finance, 52(1), 57–82.

Chen, Y., Ganesan, S., & Liu, Y. (2009). Does a firm's product-recall strategy affect its financial value? An examination of strategic alternatives during product-harm crises. Journal of Marketing, 73(6), 214–226.

Chen, Y., Narasimhan, C., & Zhang, Z. J. (2001). Individual marketing with imperfect targetability. Marketing Science, 20(1), 23–41.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: a review and assessment. Journal of Management, 37(1), 39–67.

Dutta, S., Narasimhan, O., & Rajiv, S. (1999). Success in high-technology markets: is marketing capability critical? Marketing Science, 18(4), 547–568.

Epstein, L. G., & Schneider, M. (2008). Ambiguity, information quality, and asset pricing. Journal of Finance, 63(1), 197–228.

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. Journal of Financial Economics, 33(1), 3–56.

Fama, E. F. (1998). Market efficiency, long-term returns, and behavioral finance. Journal of Financial Economics, 49(3), 283–306.

Feng, H., Morgan, N. A., & Rego, L. L. (2015). Marketing department power and firm performance. Journal of Marketing, 79(5), 1-20.

Feng, H., Morgan, N. A., & Rego, L. L. (2017). Firm capabilities and growth: the moderating role of market conditions. Journal of the Academy of Marketing Science, 45(1), 76–92.

Gassenheimer, J. B., Houston, F. S., & Davis, J. C. (1998). The role of economic value, social value, and perceptions of fairness in interorganizational relationship retention decisions. Journal of the Academy of Marketing Science, 26(4), 322-337.

Giller, C., & Matear, S. (2001). The termination of interfirm relationships. Journal of Business & Industrial Marketing, 16(2), 94–112.

Gupta, S., Lehmann, D. R., & Stuart, J. A. (2004). Valuing customers. Journal of Marketing Research, 41(1), 7-18.

Habel, J., & Klarmann, M. (2015). Customer reactions to downsizing: when and how is satisfaction affected? Journal of the Academy of Marketing Science, 43(6), 768-789.

Haenel, C. M., Wetzel, H. A., & Hammerschmidt, M. (in press). The perils of service contract divestment: when and why customers seek revenge and how it can be attenuated? Journal of Service Research.

Haenlein, M., Kaplan, A. M., & Schoder, D. (2006). Valuing the real option of abandoning unprofitable customers when calculating customer lifetime value. Journal of Marketing, 70(3), 5–20.

Haenlein, M., & Kaplan, A. M. (2012). The impact of unprofitable customer abandonment on current customers' exit, voice, and loyalty intentions: an empirical analysis. Journal of Services Marketing, 26(6), 458–470.

Halinen, A., & Tähtinen, J. (2002). A process theory of relationship ending. International Journal of Service Industry Management, 13(2), 163–180.

Heckman, J. J. (1979). Sample selection bias as a specification error. Econometrica, 47(1), 153–161.

Homburg, C., Droll, M., & Totzek, D. (2008). Customer prioritization: does it pay off, and how should it be implemented? Journal of Marketing, 72(5), 110–130.

Kalaignanam, K., Kushwaha, T., Steenkamp, J.-B. E. M., & Tuli, K. R. (2013). The effect of CRM outsourcing on shareholder value: a contingency perspective. Management Science, 59(3), 748–769.

Katsikeas, C. S., Morgan, N. A., Leonidou, L. C., & Hult, G. T. M. (2016). Assessing performance outcomes in marketing. Journal of Marketing, 80(2), 1–20.

King, D. R., Dalton, D. R., Daily, C. M., & Covin, J. G. (2004). Meta-analyses of post-acquisition performance: Indications of unidentified moderators. Strategic Management Journal, 25(2), 187-200.

Kirmani, A., & Rao, A. R. (2000). No pain, no gain: A critical review of the literature on signaling unobservable product quality. Journal of Marketing, 64(2), 66-79.

Kolari, J. W., & Pynnönen, S. (2010). Event study testing with cross-sectional correlation of abnormal returns. Review of Financial Studies, 23(11), 3996–4025.

Kothari, S. P., and Jerold B. Warner (2007). Econometrics of event studies in Handbook of Corporate Finance, B. E. Eckbo, ed. Amsterdam: Elsevier North-Holland, 3-36.

Kulkarni, M. S., Vora, P. P., & Brown, T. A. (2003). Firing advertising agencies - possible reasons and managerial implications. Journal of Advertising, 32(3), 77–86.

Kumar, V., & Shah, D. (2009). Expanding the role of marketing: from customer equity to market capitalization. Journal of Marketing, 73(6), 119–136.

Kumar, V. (2010). A customer lifetime value-based approach to marketing in the multichannel, multimedia, retailing environment. Journal of Interactive Marketing, 24(2), 71–85.

Lee, D., & Madhavan, R. (2010). Divestiture and firm performance: a meta-analysis. Journal of Management, 36(6), 1345–1371.

Lepthien, A., Papies, D., Clement, M. and Melnyk, V., (2017). The ugly side of customer management–Consumer reactions to firm-initiated contract terminations. International Journal of Research in Marketing, 34(4), 829-850.

Lewis, M. (2011) Customer Relationship Management: Maximizing Customer Lifetime Value, in the Wiley Encyclopedia or Operations Research and Management Science.

Li, S., Sun, B., & Montgomery, A. L. (2011). Cross-selling the right product to the right customer at the right time. Journal of Marketing Research, 48(4), 683–700.

McCarthy, D. M., & Fader, P. S. (2018). Customer-Based Corporate Valuation for Publicly Traded Noncontractual Firms. Journal of Marketing Research, 55(5), 617-635.

Mcwilliams, A., & Siegel, D. (1997). Event studies in management research: theoretical and empirical issues. Academy of Management Journal, 40(3), 626–657.

Miklós-Thal, J., & Zhang, J. (2013). (De)marketing to manage consumer quality inferences. Journal of Marketing Research, 50(1), 55–69.

Mittal, V., & Sarkees, M. (2006). Customer divestment. Journal of Relationship Marketing, 5(2-3), 71–85.

Mittal, V., Sarkees, M., & Murshed, F. (2008). The right way to manage unprofitable customers. Harvard Business Review, 86(4), 95–102.

Montgomery, C. A., Thomas, A. R., & Kamath, R. (1984). Divestiture, market valuation, and strategy. Academy of Management Journal, 27(4), 830–840.

Montgomery, N. V., Raju, S., Desai, K. K., & Unnava, H. R. (2017). When good consumers turn bad: psychological contract breach in committed brand relationships. Journal of Consumer Psychology, 28(3), 437–449.

Morgan, N. A. (2012). Marketing and business performance. Journal of the Academy of Marketing Science, 40(1), 102–119.

Pick, D., Thomas, J. S., Tillmanns, S., & Krafft, M. (2016). Customer win-back: the role of attributions and perceptions in customers' willingness to return. Journal of the Academy of Marketing Science, 44(2), 218-240.

Pressey, A. D., & Mathews, B. P. (2003). Jumped, pushed or forgotten? Approaches to dissolution. Journal of Marketing Management, 19(1/2), 131–155.

Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: its measurement and impact on performance. Journal of Marketing Research, 41(3), 293–305.

Reuer, J. J., Tong, T. W., & Wu, C.-W. (2012). A signaling theory of acquisition premiums: evidence from IPO targets. Academy of Management Journal, 55(3), 667–683.

Robinson, A. B., Tuli, K. R., & Kohli, A. K. (2014). Does brand licensing increase a licensor's shareholder value? Management Science, 61(6), 1436–1455.

Rosenzweig, P. M. (2007). The halo effect and the eight other business delusions that deceive managers. New York: Free Press.

Ross, S. A. (1977). The determination of financial structure. Bell Journal of Economics, 8(1), 23–40.

Rust, R. T., & Verhoef, P. C. (2005). Optimizing the marketing interventions mix in intermediate-term CRM. Marketing Science, 24(3), 477–489.

Ryals, L. (2005). Making customer relationship management work: the measurement and profitable management of customer relationships. Journal of Marketing, 69(4), 252–261.

Shah, D., Kumar, V., Qu, Y., & Chen, S. (2012). Unprofitable cross-buying: evidence from consumer and business markets. Journal of Marketing, 76(3), 78-95.

Shin, J., Sudhir, K., & Yoon, D.-H. (2012). When to "fire" customers: customer cost-based pricing. Management Science, 58(5), 932–947.

Sorescu, A., Shankar, V., & Kushwaha, T. (2007). New product preannouncements and shareholder value: don't make promises you can't keep. Journal of Marketing Research, 44(3), 468–489.

Sorescu, A., Warren, N. L., & Ertekin, L. (2017). Event study methodology in the marketing literature: an overview. Journal of the Academy of Marketing Science, 45(2), 186–207.

Spence, M. (2002). Signaling in retrospect and the informational structure of markets. American Economic Review, 92(3), 434-459.

Srinivasan, S., & Hanssens, D. M. (2009). Marketing and firm value: Metrics, methods, findings, and future directions. Journal of Marketing Research, 46(3), 293-312.

Srivastava, S. (2007, July 7). Sprint drops clients over excessive inquiries. Wall Street Journal.

Subramanian, U., Raju, J. S., & Zhang, Z. J. (2007). Customer value-based management: competitive implications. Working paper. The Wharton School of Business.

Varadarajan, P. R., Jayachandran, S., & White, J. C. (2001). Strategic interdependence in organizations: deconglomeration and marketing strategy. Journal of Marketing, 65(1), 15-28.

Waldfogel, J., & Chen, L. (2006). Does information undermine brand? Information intermediary use and preference for branded web retailers. Journal of Industrial Economics, 54(4), 425-449.

Wang, Y., & Feng, H. (2012). Customer relationship management capabilities: Measurement, antecedents and consequences. Management Decision, 50(1), 115-129.

Warren, N. L., & Sorescu, A. (2017). Interpreting the stock returns to new product announcements: how the past shapes investors' expectations of the future. Journal of Marketing Research, 54(5), 799-815.

Wiesel, T., Krausl, R., & Srivastava, R. K. (2012). Are financial analysts 'good marketers'? Implications for marketing and investor relations. MSI Working Paper, 12–108.

Wiles, M. A., Jain, S. P., Mishra, S., & Lindsey, C. (2010). Stock market response to regulatory reports of deceptive advertising: the moderating effect of omission bias and firm reputation. Marketing Science, 29(5), 828-845.

Wiles, M. A., Morgan, N. A., & Rego, L. L. (2012). The effect of brand acquisition and disposal on stock returns. Journal of Marketing, 76(1), 38–58.

Worrell, D. L., Davidson, W. N., & Glascock, J. L. (1993). Stockholder reactions to departures and appointments of key executives attributable to firings. Academy of Management Journal, 36(2), 387–401.

Wright, P., & Ferris, S. P. (1997). Agency conflict and corporate strategy: the effect of divestment on corporate value. Strategic Management Journal, 18(1), 77–83.

Zeithaml, V. A., Rust, R. T., & Lemon, K. N. (2001). The customer pyramid: creating and serving profitable customers. California Management Review, 43(4), 118–142.

TABLE 1

EXAMPLES OF UNFPROFITABLE CUSTOMER MANAGEMENT DISCLSOURES IMPACT ON SHAREHOLDER VALUE

Firm Name	Date	Excerpt from News Announcements	UCM Strategy Type	AR [0, 0]	Change in Shareholder Value (millions)
JPMorgan Chase	Aug 27, 2010	"…the bank has recently pulled back credit from its riskiest and least profitable customers." [a]	Direct: Customer Divestment	-0.80%	-$1,327.00
Sprint Nextel	Feb 28, 2007	"The company's focus on shedding customers with higher credit risk has contributed to high customer turnover in recent months, but the strategy will lead to a more loyal customer base over time." [b]	Direct: Customer Divestment	-0.43%	-$160.63
Merrill Lynch	June 20, 2001	"What Merrill Lynch is doing is shifting Canadian clients with less than $50,000 away from individual brokers to call centers. … The call center is designed to service the lowest rung of customers, those with accounts valued at $100,000 or less." [c]	Indirect: Tiered Services	+2.12%	+$936.63
Global Crossing	Aug 10, 2005	"Global Crossing has sold all of its unprofitable assets, and still has a consumer business it is phasing out through distancing." [d]	Indirect: Distancing	+1.28%	+$4.63
Allstate	July 11, 2012	"Allstate is dropping about 10,000 South Carolina home insurance customers… who don't also carry Allstate auto coverage, have older homes and who insure their homes for less than $220,000" [e]	Direct: Customer Divestment	-0.43%	-$59.05
Aetna	Nov 30, 2009	"Aetna CEO Ron Williams told analysts that Aetna would increase prices in 2010 in order to force 600,000 to 650,000 Aetna customers to drop their coverage. Executives say the company can be more profitable by dropping some business." [f]	Indirect: Price Increase	+1.12%	+$152.95

Sources: [a] Wall St Journal (2010); [b] Dow Jones News (2007); [c] Financial Post (2001); [d] Dow Jones News (2005); [e] AP Newswire (2006); [f] American Medical News (2009)
Note: Abnormal return is calculated using Fama-French-Momentum model. Change in shareholder value is based on previous day's market capitalization and AR [0, 0].

TABLE 2

SUMMARY OF PRIOR EMPIRICAL RESEARCH RELATED TO UNPORFITABLE CUSTOMER MANAGEMENT

Research	Research Focus	Perspective	Method	Sample	Key Findings	Assessment of shareholder value impact?
Reinartz et al. (2004)	CRM processes and firm performance	Manager	Cross-sectional survey	98 firms in four B2C industries in Europe	Customer relationship termination has a marginally positive effect on ROA in one of the three models tested, but has a negative and non-significant relationship with perceptual performance.	No
Haenlein et al. (2006)	Compare CLV with vs. excluding option value of abandoning unprofitable customers	Manager	Analytical model and Monte Carlo simulation	N/A	The divergence between CLV using and not using option value of ending relationships with unprofitable customers is substantial.	No
Haenlein and Kaplan (2012)	Impact of firing unprofitable customers on the firm's current customers' exit, voice, and loyalty intentions	Customer	Online experiment	385 U.S customers	Current customers are significantly more likely to respond actively to unprofitable customer divestment (exit/voice) than passively through silence and loyalty.	No
Shin et al. (2012)	How cost-based pricing affects CRM and profit	Manager	Two-period monopoly model	N/A	It is optimal to fire high-cost customers when the customer cost heterogeneity is sufficiently large. Customer cost-based pricing is profitable.	No
Lepthien et al. 2017	How customers react to contract terminations	Customer	Experiment, field study	2791 respondents	Service termination reduces brand attitude and enhances negative WOM.	No
Haenel et al. in press	How service contract divestment impacts customer revenge	Customer	Experiment, retrospective survey	1011 customers	Service termination (demotion) has a stronger impact on customer revenge when predivestment satisfaction is high (low).	No
This Study	How unprofitable customer management strategy disclosures impact abnormal stock returns	Investor	Event study	192 UCM events	*Firms'* UCM strategy disclosures result in an average abnormal stock return of -.53%. Investors respond more favorably if the firm uses indirect strategies, reveals certain strategic intent (i.e. strengthen core, serve more profitable customers), has stronger marketing capabilities, and receives positive publicity.	Yes

TABLE 3
VARIABLES, MEASURES AND DATA SOURCES

Variable	Operational Measure	Data Source
	A: Variables in the First-stage Heckman Selection Procedure	
Firm Profitability$_{t-1}$	(Sales-COGS)/sales at time t-1	Compustat
Slack $_{t-1}$	Current assets$_{t-1}$/current liabilities$_{t-1}$	Compustat
Capacity Constraints $_{t-1}$	Sales/assets relative to industry average at time t-1	Compustat
Firm Size $_{t-1}$	Total assets $_{t-1}$	Compustat
Concentration $_{t-1}$	HHI $_{t-1}$	Compustat
UCM Activity Cycle $_{t}$	1 if there were more than the average number of UCM events in sample in a year, 0 otherwise.	Count
UCM Industry Prevalence $_{t}$	(Number of peer firms disclosing UCM activities in the same industry-1)/(total number of firms in the same industry-1)	Compustat
	B: Variables in the Second-stage Cross-sectional Regression Analyses	
Shareholder Value Change	Abnormal stock returns in the [0,0] event window Fama and French's (1993) and Carhart's (1997) momentum factors	Center for Research in Security Prices (CRSP) and Ken French
Direct UCM Strategy: Divestment	1, if firm manages unprofitable customers by explicitly telling them to quit, 0 otherwise.	Press reports
Indirect UCM Strategy: Price increase	1, if the firm introduced price increases to deal with some low value customers, 0 otherwise.	Press reports
Indirect UCM Strategy: Tiered service	1, if the firm deals with some low value customers by migrating them to lower-tier services, 0 otherwise.	Press reports
Indirect UCM Strategy: Distancing	1, if firm does UCM by distancing (i.e. reducing relationship strength), 0 otherwise.	Press reports
Strategic Intent (SI): Focus on Core Business	1, if disclosed purpose is to focus on customers in core businesses, 0 otherwise.	Press reports
SI: Serve more Profitable Customers	1, if disclosed purpose is to free up resources for more profitable customers, 0 otherwise.	Press reports
Voluntary Disclosure	1, if news of the UCM was released voluntarily by the focal firm, 0 otherwise.	Press reports
SI: Response to New Regulations	1, if disclosed purpose is a response to effect of new government regulations on affected customers' profitability/value, 0 otherwise.	Press reports
Number of Directly Affected Customers	1 if the UCM affected fewer than 15% of the firm's existing customer base; 2 if the UCM affected more than 15% of the firm's existing customer base; 0 if neither 1 or 2 (i.e. no information on affected customer size)	Press reports
UCM Target: Individual Customers	1 if UCM targets at unprofitable individual customers, 0 otherwise (e.g., a whole segment).	Press reports
UCM Stage: Ongoing	1 if firm is currently engaged in UCM activities, 0 otherwise (e.g., "will do" and "has done").	Press reports
Marketing Capabilities	Input output method using SFE, see details in text.	Compustat, USPTO, AMAC
Prior Performance	Tobin's Q in the previous year before the UCM disclosure.	Compustat
UCM Frequency	The number of past UCM disclosures for the firm.	Press reports
Customer Profitability Knowledge	1, if firm explicitly discloses that they know profitability of affected customers, 0, otherwise.	Press reports
Firm Size	Logged total assets in the previous year.	Compustat
Firm Financial Leverage	Debt/equity (DLTT/CEQ).	Compustat
Stock Performance CAR$_{(-30,-2)}$	Cumulative abnormal returns in the [-30,-2] event window before disclosure.	CRSP and Ken French website
Positive Publicity	1, if the sentiment of the press report is positive, 0 otherwise.	Press reports
Media Coverage	1, if UCM disclosure is by national press such as New York Times, USA Today, etc., 0 otherwise.	Press reports
B2C	1, if B2C, 0 otherwise.	Press reports
Service	1, if service, 0 otherwise.	Press reports

TABLE 4
UNIVARIATE STATISTICS (N=192)

Variable	Mean	SD	S.E.	Min	Median	Max
$AR_{(0,0)}$	-.53%	3.45%	.26%	-19.82%	-.13%	11.77%
Direct UCM Strategy: Divestment	.569	.497	.037	.000	1.000	1.000
Price Increase UCM Strategy	.177	.383	.028	.000	.000	1.000
Tiered Service UCM Strategy	.116	.321	.024	.000	.000	1.000
Distancing UCM Strategy	.110	.314	.023	.000	.000	1.000
Strategic Intent (SI): Focus on Core	.061	.240	.018	.000	.000	1.000
SI: Serve more Profitable Customers	.144	.352	.026	.000	.000	1.000
Voluntary Disclosure	.702	.459	.034	.000	1.000	1.000
SI: Response to New Regulations	.050	.218	.016	.000	.000	1.000
Number of Directly Affected Customers	.381	.670	.050	.000	.000	2.000
UCM Target	.591	.493	.037	.000	1.000	1.000
UCM Stage	.381	.487	.036	.000	.000	1.000
Marketing Capabilities	78.745	7.795	.579	1.000	79.360	1.000
Prior Performance	.860	1.124	.084	-4.148	.664	11.776
UCM Frequency	2.956	2.584	.192	1.000	2.000	11.000
Customer Profitability Knowledge	.818	.387	.029	.000	1.000	1.000
Firm Size	246,698	533,804	39,677	12	43,255	2,573,126
Leverage	4.564	34.183	2.541	-27.025	.673	455.390
Stock Performance $CAR_{(-30,-2)}$	.23%	19.50%	1.45%	-97.87%	.72%	12.15%
Positive Publicity	.249	.433	.032	.000	.000	1.000
Media Coverage	.326	.470	.035	.000	.000	1.000
UCM Activity Cycle	.707	.456	.034	.000	1.000	1.000
B2C Industry	1.011	.707	.053	.000	1.000	2.000
Service Industry	.901	.300	.022	.000	1.000	1.000
Mills-lambda	1.043	.252	.019	.384	1.070	1.590

TABLE 5
CORRELATIONS

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. AR (0,0)	1.00																								
2. Direct UCM Strategy: Divestment	-.03	1.00																							
3. Indirect UCM Strategy: Price Increase	.00	-.53	1.00																						
4. Indirect UCM Strategy: Tiered Service	.02	-.42	-.17	1.00																					
5. Indirect UCM Strategy: Distancing	.02	-.41	-.16	-.13	1.00																				
6. SI: Focus Core	.00	-.01	.06	-.02	-.02	1.00																			
7. SI: Serve Profitable	.11	-.25	-.11	.34	.16	-.10	1.00																		
8. Voluntary Disclosure	-.09	.19	-.05	-.18	-.04	.01	-.11	1.00																	
9. SI: New Regulations	.03	.10	-.11	-.08	.00	-.06	-.09	-.18	1.00																
10. Directly Affected Customer Size	.01	.10	.02	-.13	-.07	.10	-.12	.14	.02	1.00															
11. UCM Target	-.07	-.02	.03	.13	-.14	-.07	-.04	.10	-.17	-.05	1.00														
12. UCM Stage	-.03	-.26	-.10	.28	.20	.04	.13	-.01	-.13	.01	.03	1.00													
13. Marketing Capabilities	.13	.22	-.33	.01	.04	.01	-.07	.09	-.07	.06	-.11	-.02	1.00												
14. Prior Performance	-.28	-.01	-.10	.12	.03	.08	.09	-.03	-.10	-.07	.03	.08	.01	1.00											
15. UCM Frequency	.10	-.13	.20	.00	-.07	-.13	-.07	.06	-.02	.36	-.01	.09	-.11	-.24	1.00										
16. Profitability Knowledge	-.06	-.18	.14	.08	.08	.06	.11	.04	-.42	-.29	.19	.08	-.05	-.02	.02	1.00									
17. Firm Size	.15	-.22	.10	.16	-.02	-.23	.05	-.23	.32	.00	-.15	.12	.07	-.27	.31	-.13	1.00								
18. Leverage	.24	.09	-.04	-.04	-.04	-.01	-.04	-.10	-.01	-.04	-.09	.10	-.09	.02	-.08	-.17	.00	1.00							
19. Stock Performance $CAR_{(-30,-2)}$	.26	.02	.00	-.02	-.01	-.15	.05	.03	-.04	-.03	.05	-.05	.10	-.16	-.01	.03	-.04	-.18	1.00						
20. Positive Publicity	.23	-.02	.00	.03	.00	.12	.17	.04	-.13	.02	-.02	.13	-.17	.12	-.08	.11	-.16	.09	.02	1.00					
21. Media Coverage	-.09	.06	-.01	-.14	.09	-.08	-.05	.07	.11	.03	.00	.04	-.19	-.06	.04	-.01	.09	.13	-.15	.01	1.00				
22. UCM Activity Cycle	.03	-.12	-.02	.20	.03	.06	.19	.01	-.24	.08	.16	-.02	-.01	.11	.03	.10	-.20	.04	.05	.20	-.12	1.00			
23. B2C	.00	-.35	.05	.34	.04	-.14	.15	-.02	.07	.08	.03	.23	-.11	-.10	.20	.01	.48	.01	-.03	-.03	-.06	.04	1.00		
24. Service	.15	-.14	.15	.06	-.06	-.15	.03	-.06	.08	.11	-.01	.11	-.02	-.12	.21	-.16	.49	.03	.07	-.07	.07	-.01	.29	1.00	
25. Mills-lambda	-.01	.13	.03	-.05	-.19	.08	.04	.11	.04	-.07	-.03	-.06	-.35	.05	-.15	.11	-.37	.05	.02	-.01	.10	-.23	-.11	-.08	1.00

Note: Correlations with an absolute value larger than .144 significant at $p < .05$.

TABLE 6A (N=192)
IMPACT OF UNPROFITABLE CUSTOMER MANAGEMENT DISCLOSURES

Event Window	Sample Size	Average Stock Abnormal Return	Positive (Negative) Abnormal Returns	Portfolio Time-Series Standard Deviation Test (CDA)
(-1,-1)	192	.19%	102 (90)	.953
(-1,0)	192	-.34%	94 (98)	-1.190
(0,0)	**192**	**-.53%**	**90 (102)**	**-2.635*****
(0,+1)	192	-.28%	96 (96)	-.975
(-1,+1)	192	-.09%	99 (93)	-.246
(-2,+2)	192	-.22%	105 (87)	-.481
(-3,+3)	192	-.33%	94 (98)	-.624
(-4,+4)	192	-.47%	96 (96)	-.772
(-5,+5)	192	.18%	97 (95)	.276

Notes: Fama-French-Momentum model. All tests two-tailed. *** p < .01; ** p < .05; * p < .10.

TABLE 6B
AVERAGE ARs AROUND UCM DISCLOSURES

Model	Coefficient	S.E.	Portfolio Time-Series Standard Deviation Test (CDA)
Fama-French Four Factor (%)	-.53%	(.00243)	**-2.635*****
Fama-French Three Factor (%)	-.54%	(.00244)	-2.683***
Market (%)	-.51%	(.00245)	-2.495**
Market-Adjusted (%)	-.62%	(.00253)	-2.818***

Notes: Event window [0, 0]. All tests two-tailed. *** p < .01; ** p < .05; * p < .10.

TABLE 7
HECKMAN 1ST STAGE SELECTION MODEL RESULTS

Selection Equation Independent Variables	Coefficient	S.E.
Intercept	-2.546***	(.406)
$Profitability_{(t-1)}$	-0.278*	(.162)
$Slack_{(t-1)}$	0.018	(.067)
$Capacity\ Constraints_{(t-1)}$	0.245**	(.121)
$Firm\ Size_{(t-1)}$	0.110***	(.026)
$Concentration\ (HHI)_{(t-1)}$	3.571***	(.890)
$UCM\ Activity\ Cycle_{(t)}$	0.328**	(.133)
$UCM\ Prevalence_{(t)}$	1.101**	(.464)
Number of Observations = 566		

Notes: All tests two-tailed. *** $p < .01$; ** $p < .05$; * $p < .10$.

TABLE 8
EFFECT OF UCM DISCLOSURE ON FIRM VALUE

Predictor	Hypothesized Sign	Fama-French Four Factor Model	S.E.
Intercept		-.223***	(.073)
UCM Strategy (Signal) Characteristics			
H1: Direct UCM Strategy: Divestment	-	-.010**	(.005)
H2: Strategic Intent (SI): Focus on Core	+	.025***	(.009)
H3: SI: Serve more Profitable Customers	+	.015**	(.007)
H4: Voluntary Disclosure	+	-.007	(.005)
SI: Response to New Regulations		.006	(.011)
Number of Directly Affected Customers		-.001	(.003)
UCM Target: Individual Customers		.002	(.005)
UCM Stage: Ongoing		-.007	(.006)
UCM Firm (Signaler) Characteristics			
H5: Marketing Capabilities	+	.003***	(.001)
H6: Prior Performance	-	-.007***	(.002)
UCM Frequency		.002*	(.001)
Customer Profitability Knowledge		-.003	(.007)
Firm Size		.002	(.002)
Firm Financial Leverage		.001***	(.000)
Stock Performance $CAR_{(-30,-2)}$		.044***	(.011)
UCM Disclosure (Signaling) Environment			
H7: Positive Publicity	+	.026***	(.005)
H8: Media Coverage	+	-.005	(.005)
UCM Activity Cycle		-.001	(.006)
B2C Industry		-.009**	(.004)
Service Industry		.017	(.019)
Mills-lambda		.005	(.017)
Industry Dummies (SIC2)		Yes	
Wald χ^2		170.70***	

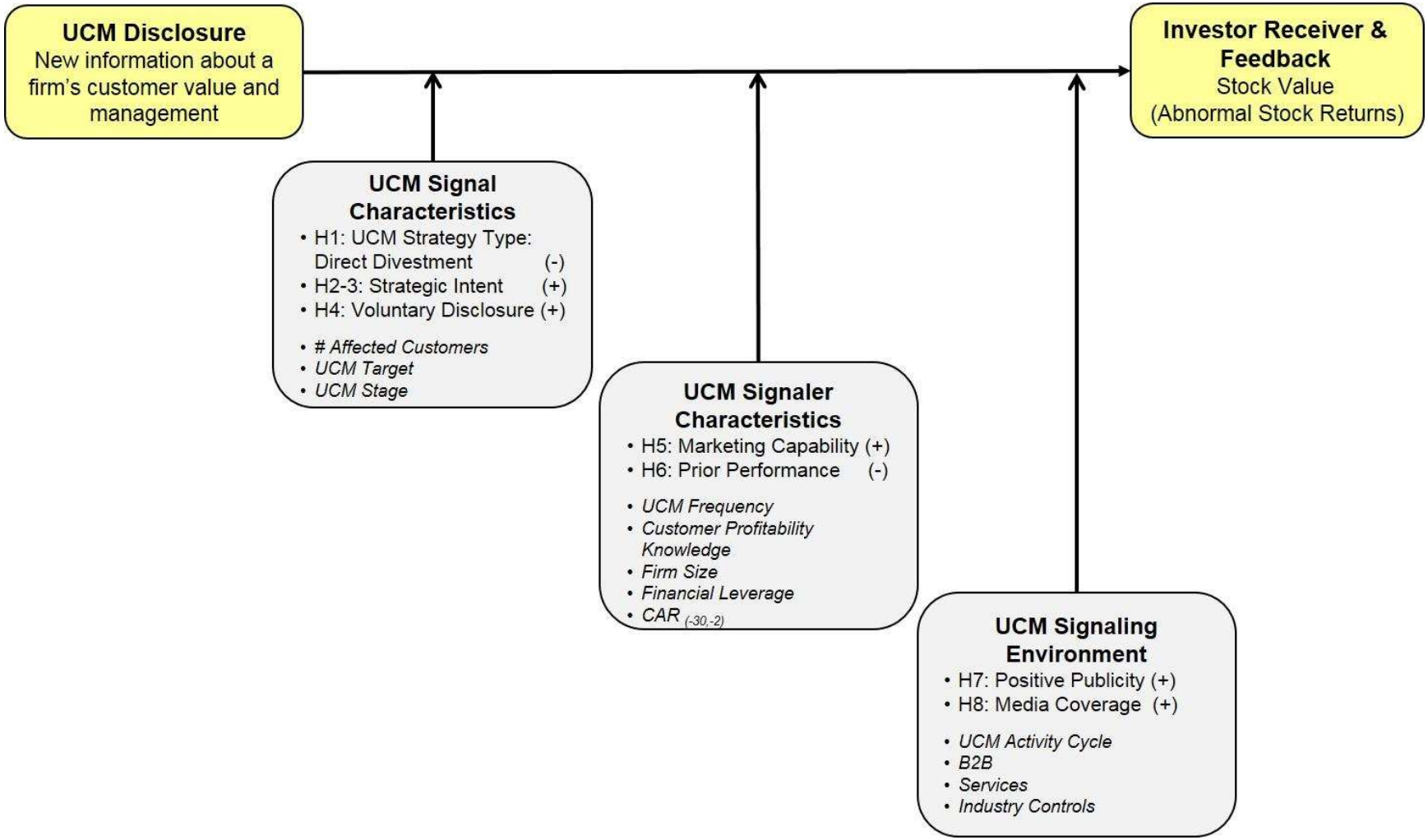
Notes: The dependent variable is AR in window [0, 0]. All tests are two-tailed. *** p < .01; ** p < .05; * p < .10.

TABLE 9
FIRM PERFORMANCE BEFORE AND AFTER UCM DISCLOSURE

Financial Performance Indicator	8Q Prior	8Q Post	Difference (Post-Prior)
Average Sales Growth	**2.80%*****	**1.57%*****	**-1.19%****
Average Sales Growth for AR(+) firms	2.11%***	1.24%***	-.93%
Average Sales Growth for AR(-) firms	3.46%***	1.88%***	-1.45%**
Average Margin growth	**-3.35%**	**5.31%*****	**8.61%***
Average Margin growth for AR(+) firms	-12.91%**	6.33%**	19.54%***
Average Margin growth for AR(-) firms	5.98%*	4.34%*	-2.31%
Average P/B (price-to-book)	**.27*****	**.29*****	**.02**
Average P/B for AR(+) firms	.35***	.38***	.03
Average P/B for AR(-) firms	.20***	.21***	.01
Average Cash Flow	**2018.51*****	**2720.17*****	**701.66****
Average Cash Flow for AR(+) firms	1977.30***	3012.69***	1035.39**
Average Cash Flow for AR(-) firms	2059.10***	2432.09***	372.98

Notes: significance level shows if the number is significantly different from zero. *** $p < .01$; ** $p < .05$; * $p < .10$

FIGURE 1
UCM Disclosure and Shareholder Value



APPENDIX W1
UCM ANNOUNCEMENT VARIABLE CODING EXAMPLES

Variable Name	Coding Scheme	Coding Example Excerpts from News Announcements/Press Releases
Direct UCM strategy: Customer Divestment	1, if firm manages unprofitable customers by explicitly terminating them, 0 otherwise.	1-" J.P. Morgan Chase & Co. has closed thousands of accounts it deemed not worth the risk over the past year, including those of foreign-government officials and check cashers, according to a spokeswoman."
		1-" American Express Co. is paying some cardholders $300 each to close accounts so the lender can reduce the risk of defaults as the recession deepens"
		1-"Waste Management recently cancelled service to almost 3,000 unprofitable customers in New York City."
Indirect UCM strategy: Price Increase	1, if the firm introduced price increases to deal with some low value customers, 0 otherwise.	1-"Dallas-based Paging Network Inc. has raised rates for subscribers who received hundreds of messages but paid only the rock-bottom monthly fee, intentionally driving away hundreds of thousands of customers on whom the company lost money"
		1-"The customers the insurer has been losing in its business-insurance segment, in many cases, have been the ones that were the least profitable, according to Travelers Chief Operating Officer Brian MacLean. The company's effort to raise rates on those clients has driven some into the arms of competitors that are offering the coverage at prices that would have resulted in poor returns for Travelers, he said."
		1-"FedEx, a unit of FDX Corp. of Memphis, Tenn., imposed double-digit rate increases on some major shippers who generated lots of expensive residential deliveries without bringing in as much revenue."
Indirect UCM: Tiered Service	1, if the firm deals with some low value customers by migrating them to lower-tier services, 0 otherwise.	1-"Those that survive will need to cut costs, and one of the easiest ways is to get rid of their least profitable customers, or at least reduce the cost of dealing with them. That Merrill Lynch is doing this is no secret; this year it shifted Canadian clients with less than $50,000 away from individual brokers to call centers."
		1-"At Sears, Roebuck & Co., big spenders on the company's credit card get to choose a preferred two-hour time slot for repair calls while low-value patrons are given a four-hour slot."
		1-"BankAmerica, the second-largest U.S. bank, routes calls from preferred and unprofitable customers to different operators; a personal-identification number entered by each caller allows the bank to determine, among other things, the customer's profitability ranking."
Indirect UCM: Distancing	1, if the firm divested customers by distancing (i.e. reducing relationship strength), 0 otherwise.	1-"AT&T confirmed it no longer plans to compete for residential local and standalone long-distance customers. The company decided to stop marketing to existing customers in seven states."
		1-"Gregory R. Binkley, President and Chief Executive Officer of the Company (The Sportsman's Guide, Inc.), stated,"… On the catalog side, we have eliminated mailings to unprofitable customer segments of the house customer file."
		1-"Global Crossing still has a consumer business it is phasing out through distancing."
Voluntary Disclosure	1, if news of the UCM was released voluntarily by the focal firm, 0 otherwise	1-"GM announced it would then look to end relationships with dealers that do only a small volume of business with GM, and then move on to other dealers."

		1-“Unum Group has made it clear it is dropping clients and passing up new business rather than sell cheap policies whose price does not justify the risk of an expensive insurance claim.”
		1-“Charter Communications Inc. lost some basic service subscribers during the quarter because it's disconnecting customers who aren't paying their bills on time. In an interview the company made it clear that losing those low value customers has been an intentional move, said analyst Robin Diedrich”
Strategic Intent: Focus on Customers in Core Business	1, if the disclosed purpose is to focus on customers in core businesses, 0 otherwise.	1-“To strengthen its core business, PageNet has increased prices and dropped unprofitable customers - almost one million since 1998 – and focused on its remaining customers.”
		1-“Blockbuster Chief Executive James Keyes is attempting to refocus on customers for its core business through new initiatives, including shedding unprofitable customers by raising prices on its online plan that competes with Netflix.”
		1-“A planned exit from unprofitable customers in its core heavy-duty trucking air springs product line, and restructuring activities to serve remaining customers further contributed to the decline (of Enpro Industries Inc.).”
Strategic Intent: Serve More Profitable Customers	1, if the disclosed purpose is to free up resources to serve more profitable customers, 0 otherwise.	1-“Early this year, Union Pacific's intermodal business started instituting a minimum price higher than the lowest third of its customers paid. If the less profitable customers dropped out, it wasn't a great loss. Instead, it freed up capacity for customers at the higher end of the pricing ladder, who wanted more space on the trains.”
		1-“The company (EFTC Corp.) dropped many of its unprofitable clients to focus on higher revenue-making customers.”
		1-“AT&T Wireless said increased churn is an anticipated byproduct of its focus on margin growth and a shift in its resources toward more profitable customers.”
Strategic Intent: Deal with Costs Arising from New Regulations Affecting Some Customers	1, if the disclosed purpose is a response to effect of new government regulations on affected customers profitability/value, 0 otherwise.	1-“Deutsche Bank AG is asking U.S. clients of its operations in Belgium to close their accounts with the German banking giant and transfer them to rivals in a move to deal with the costs of complying with new U.S. rules.”
		1-“Following recent changes in bank regulations regarding foreign bank accounts J.P. Morgan Chase & Co. has closed thousands of accounts it deemed not worth the risk over the past year, including those of foreign-government officials and check cashers, according to a spokeswoman.”
		1-“Fearing increased oversight and growing compliance costs, California Merchants Bank, the last national bank in the U.S. willing to transfer money to Somalia, terminated all customers making remittances to that war-torn country earlier this year.”
Number of Directly Affected Customers	1 if the UCM affected fewer than 15% of the firm’s existing customer base;	1-“Verizon will cut off unlimited data users who use too much unlimited data. Verizon says it's only about 1 percent of customers that are directly affected by this move.”
	2 if the UCM affected more than 15% of the firm’s existing customer base; 0 if neither 1 or 2 (i.e. no information on affected customer size)	2-“the company (Aetna) has been aggressively reducing the ranks of its least profitable customers… Aetna was providing insurance for nine million people; today the number is about half that.”

UCM Target: Individual Customers	1 if UCM targets unprofitable individual customers, 0 otherwise (e.g., a whole segment).	1-"First Chicago set the $3-per-visit fee for customers who use tellers more than four times a month and have less than $2,500 in their accounts. 30,000 of them -- or close to 3% of the bank's total customers -- closed their accounts."
		1-"Aetna is currently working to cull unprofitable members from its ranks and expects enrollment to drop about 10% this year."
		1-"Bank One Corp. canceled the Atlanta-based furniture-rental firm's $30 million line of revolving credit. A Bank One executive told Danielson last fall that the bank was focusing on more lucrative customers and that Aaron, a mid-size company, didn't generate sufficient profit. Bank One would not comment on specific customers but acknowledged that it is dropping those that don't meet its profit targets."
UCM Stage: Ongoing	1 if the firm is currently engaged in UCM activities, 0 otherwise (e.g., "will do" and "has done").	1-"CNW has been making progress on the pricing and routing initiatives by continuously shedding unprofitable customers."
		1-"Meantime, Maxxim continues to gradually shed customers with less-profitable contracts that it inherited about two years ago when it bought Sterile Concepts Holdings"
		1-"Aetna is attempting a turnaround by jettisoning money-losing customers."
Customer Profitability Knowledge	1, if the firm explicitly discloses that they know how profitable the UCM affected customers are, 0, otherwise	1-"Two years ago, the shipping giant began analyzing the returns on its business for about 30 large customers that generate about 10% of its total volume. It found that certain customers, including some requiring lots of residential deliveries, weren't bringing in as much revenue as they had promised when they first negotiated discounted rates. FedEx has now imposed double-digit rate increases on some major shippers who generate lots of expensive residential deliveries, telling several they could take their business elsewhere."
		1-"Bank One Corp. canceled the Atlanta-based furniture-rental firm's $30 million line of revolving credit. A Bank One executive told Danielson last fall that the bank was focusing on more lucrative customers and that Aaron, a mid-size company, didn't generate sufficient profit. Bank One would not comment on specific customers but acknowledged that it is dropping those that don't meet its profit targets."
		1-"BankAmerica, the second-largest U.S. bank, routes calls from preferred and unprofitable customers to different operators; a personal-identification number entered by each caller allows the bank to determine, among other things, the customer's profitability ranking."
Positive Publicity	1, if the sentiment of the press report is positive, 0 otherwise.	1-"Aetna has dropped money-losing customers and gradually regained support on Wall Street. Most of the managed care stocks have been strong this year. The company is already pulling its HMOs out of California and Georgia as it eliminates almost two million unprofitable customers by 2001 August 8th."
		1-"Analysts attributed the improving performance of the company to better internal management. The first big act of the new initiatives was cutting all contracts from money-losing clients."
		1-"Josh Stirling, an insurance analyst….said he was impressed with the company's aggressiveness at raising prices and its "chasing away" of undesirable customers. The company has the expertise and data to "make reliably intelligent underwriting decisions," he said."

APPENDIX W2
ROBUSTNESS TESTS: ALTERATIVE BENCHMARK MODELS

Predictor	Fama-French Three Factor Model	S.E.	Market Model	S.E.	Market-adjusted Model	S.E.
Intercept	-.227***	(.071)	-.231***	(.071)	-.184***	(.073)
H1: Direct UCM Strategy: Divestment	-.010**	(.005)	-.011**	(.005)	-.010**	(.005)
H2: Strategic Intent (SI): Focus on Core	.026***	(.010)	.027***	(.010)	.026**	(.010)
H3: SI: Serve more Profitable Customers	.014**	(.007)	.015**	(.007)	.014**	(.007)
H4: Voluntary Disclosure	-.007	(.005)	-.008	(.005)	-.007	(.005)
SI: Response to New Regulations	.003	(.011)	.002	(.012)	.004	(.012)
Number of Directly Affected Customers	-.001	(.003)	-.001	(.004)	-.003	(.004)
UCM Target: Individual Customers	.003	(.005)	.006	(.005)	.005	(.005)
UCM Stage: Ongoing	-.008	(.005)	-.008	(.005)	-.009	(.006)
H5: Marketing Capabilities	.003***	(.001)	.003***	(.001)	.002***	(.001)
H6: Prior Performance	-.007***	(.002)	-.007***	(.002)	-.007***	(.002)
UCM Frequency	.002*	(.001)	.003***	(.001)	.003**	(.001)
Customer Profitability Knowledge	-.008	(.007)	-.007	(.007)	-.010	(.007)
Firm Size	.003	(.002)	.002	(.002)	.001	(.002)
Firm Financial Leverage	.001***	(.000)	.001***	(.000)	.001***	(.000)
Stock Performance $CAR_{(-30,-2)}$	.042***	(.011)	.052***	(.012)	.060***	(.014)
H7: Positive Publicity	.027***	(.005)	.026***	(.005)	.026***	(.005)
H8: Media Coverage	-.005	(.005)	-.007	(.005)	-.009	(.006)
UCM Activity Cycle	.001	(.006)	.002	(.006)	.000	(.006)
B2C Industry	-.008**	(.003)	-.007*	(.004)	-.007*	(.004)
Service Industry	.018	(.019)	.013	(.019)	.018	(.020)
Mills-lambda	.009	(.016)	.012	(.017)	.011	(.018)
Industry dummies (sic2)	Yes		Yes		Yes	
Wald χ^2	175.46***		171.78***		161.34***	

Notes: All tests two-tailed. *** p < .01; ** p < .05; * p < .10.

APPENDIX W3

UNIVARIATE STATISTICS OF HECKMAN 1ST STAGE SELECTION MODEL (N=566)

Variable	Mean	SD	S.E.	Min	Median	Max
Fire	.320	.467	.020	.000	.000	1.000
Profitability$_{(t-1)}$	.329	.390	.017	-4.762	.346	4.276
Slack$_{(t-1)}$	.907	.920	.039	.000	.743	7.080
Capacity Constraints$_{(t-1)}$	.819	.476	.020	.000	.828	5.293
Firm Size$_{(t-1)}$	235082	528720	22382	3.893	27624	377120
Concentration (HHI)$_{(t-1)}$	.102	.077	.003	.023	.083	.249
UCM Activity Cycle$_{(t)}$	.659	.474	.020	.000	1.000	1.000
UCM Prevalence$_{(t)}$	.260	.125	.005	.000	.259	1.000

APPENDIX W4

CORRELATIONS OF HECKMAN 1ST STAGE SELECTION MODEL

Variable	1	2	3	4	5	6	7	8
1. Fire	1.00							
2. Profitability$_{(t-1)}$	-.07	1.00						
3. Slack$_{(t-1)}$	-.01	.02	1.00					
4. Capacity Constraints$_{(t-1)}$	.02	-.01	.00	1.00				
5. Firm Size$_{(t-1)}$	.08	.14	.05	-.17	1.00			
6. Concentration (HHI)$_{(t-1)}$	.12	-.12	.06	-.03	-.52	1.00		
7. UCM Activity Cycle$_{(t)}$	.07	-.01	-.34	-.01	-.22	.06	1.00	
8. UCM Prevalence$_{(t)}$	.13	-.05	-.07	-.13	.08	.12	-.03	1.00

Note: Correlations with an absolute value larger than .085 significant at $p < .05$.