

Undeserved Loss:
The Spread of
Legitimacy Loss
to Innocent
Organizations in
Response to Reported
Corporate Deviance

Stefan Jonsson

Uppsala University

Henrich R. Greve

INSEAD

Takako

Fujiwara-Greve

Keio University

This paper theorizes about why discoveries of corporate deviance that damage the legitimacy of the responsible organization may also have consequences for other organizations. We propose that audiences generalize from deviance by one organization to others that are similar. The result is a withdrawal from transactions even from non-culpable organizations as audiences seek to avoid organizations that they associate with a deviant act. We show that two scandals involving Skandia AB, a Swedish insurance firm that had a subsidiary offering mutual funds, affected mutual fund providers owned by other insurance firms in 2000–2004, as well as mutual fund subsidiaries of other firms with similar characteristics. The effect was greatest for firms more similar to Skandia and firms owning real estate, which was the context for one of the scandals. Thus audience members' categorization rules lead to spread of legitimacy loss in response to an isolated act of organizational deviance. ●

Organizational behaviors that deviate from societal norms periodically appear in the news and in scholarly writing. Firms have been associated with deceptive accounting (Krishnan, 2005; Harris and Bromiley, 2007), option backdating (Lie, 2005), sweatshops (Rock, 2003), dangerous products (Govindaraj and Jaggi, 2004), and environmental degradation (Hoffman, 1999), leading to condemnation of the focal firms and discussions about the causes and consequences of corporate avarice and callousness. Researchers have examined how the discovery of deviance affects the focal organization and have documented deterioration in shareholder value and performance (Davidson, Worrell, and Lee, 1994; Baucus and Baucus, 1997; Rock, 2003) and loss of legitimacy (Elsbach and Sutton, 1992; Elsbach, 1994; Sullivan, Haunschild, and Page, 2007). Yet many events involving specific organizations expand to become broader debates on corporate deviance as a social problem, in some cases leading to reactions from customers or legislative acts with consequences far beyond the responsible organization. For example, the Enron scandal tainted the overall reputation of its auditor Arthur Andersen, not just that of the Houston office that handled the Enron account, and caused its clients to withdraw their business (Jensen, 2006). It also cast doubt on auditing firms in general and, along with other accounting scandals such as WorldCom and Tyco, gave impetus to the wide-ranging Sarbanes-Oxley act that now regulates U.S. accounting and auditing practices.

The mechanism behind the broader consequences of deviance is generalization. Individuals observe a single act of deviance, interpret it as potentially harmful or contrary to social norms, and proceed to incorporate the possibility of such events into their general knowledge about organizations. This is a distinct mechanism of deinstitutionalization that differs from earlier predictions that functional failure or changing social values can delegitimize organizations (Oliver, 1992; Haveman and Rao, 1997). Legitimacy rests on audiences' judgments of whether a set of organizations follow norms and serve the welfare of society at large (Suchman, 1995; Deephouse and Suchman, 2008), so a single act of organizational deviance will affect legitimacy if it leads to

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contagion of judgment from the culpable organization to others that audience members see as related. Thus two central questions for building theory on the consequences of organizational deviance are what kinds of actions are contagious and what kinds of actors are exposed to contagion?

The theory of scandals predicts that an audience judges that a deviant act is contagious when it appears in the press and a high-status actor is responsible and that the effect will spread to actors with network ties with the responsible actor (Adut, 2005). Empirical work on audiences' judgments has found effects of association through visible interorganizational ties in the focal organizational population (Podolny, 1993; Jensen, 2006) or between the focal population and mediators who shape the audiences' judgments (Zuckerman, 1999; Hsu, 2006b). But network contagion is only part of the answer. Theories of social identities (Tajfel and Turner, 1986) and organizational forms (Hannan, Pólos, and Carroll, 2007) provide a broader route for the transmission of guilt. Audiences categorize organizations by comparing shared characteristics, and a contagion of legitimacy loss can take place among organizations that are categorized as similar.

Research on organizational forms has already contributed to our knowledge about the categorization of organizations. Organizational forms are often identified as organizations sharing industry and operational blueprints, but they are formally defined as externally imposed social identities formed by a set of diagnostic characteristics and expected values on these characteristics (Hannan, Pólos, and Carroll, 2007). There is abundant evidence on legitimacy building within an organizational form (e.g., Carroll and Hannan, 2000) and some evidence on legitimacy transfer from an existing organizational form to an emerging organizational form with shared characteristics (Dobrev, Ozdemir, and Teo, 2006), suggesting that audiences generalize within a form and between similar forms. Audiences also generalize based on characteristics that are easily available because they are evoked by the deviant act (Roehm and Tybout, 2006). There are thus three ways in which legitimacy loss in response to a deviant act can spread: within an organizational form, across organizational forms with characteristics similar to the deviant organization, and across organizations with characteristics made salient by the deviant act. All actors may not be equally susceptible to blame through contagion, however, as high status may insulate organizations from legitimacy loss caused by the deviance of others. Even so, the fallout from deviant organizational behavior may be far wider and less controllable than it would be if only network ties spread the blame.

To examine the spread of legitimacy loss, we analyzed how two scandals in the Swedish insurance company Skandia AB affected market shares in the mutual fund market, rather than in their core insurance market. The mutual fund market is a good context for our investigation for two reasons. First, it allows a demonstration of generalization on very weak grounds. In this scandal, there were at least two steps of distance from the original wrongdoing to the mutual fund market. The scandal occurred in a parent firm, not a fund management firm, during a time period free of scandals in

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Swedish mutual fund management firms. Moreover, even if the legitimacy of the fund management firm may be hurt as a member of the group, the value of a mutual fund is equal to the value of the securities it holds, which makes it independent of the value of the stock issued by the mutual fund management organization, and hence its legitimacy. Thus, if customers left because of feared value loss, then this fear was based on overgeneralization. Similarly, if customers left because of moral repulsion at the scandal, overgeneralization was also at work, because none of the mutual fund provider firms in the sample were guilty of wrongdoing.

Second, contagion across organizational forms can be observed in the mutual fund market because mutual funds are sold by subsidiaries of organizations from a range of organizational forms. Subsidiaries of banks, life insurance firms, and specialist pension firms, as well as independent stock brokerage firms offer mutual funds. The mutual fund market thus involves a sufficiently diverse set of organizations that it becomes possible to measure which, if any, organizations apart from Skandia were contaminated by these scandals. The evidence of contagion from this insurance firm scandal would be strongest if it affected the mutual fund subsidiaries of firms that were not even involved in insurance but shared characteristics with Skandia, showing that deviance by one organization can threaten the legitimacy of innocent organizations.

DEVIANCE AS A THREAT TO NORMATIVE LEGITIMACY

Work on the normative pillar of legitimacy in institutional theory considers organizations to be legitimate if audiences judge that their means and ends conform to social norms, values, and expectations (Ashforth and Gibbs, 1990; Suchman, 1995). Hence there is pressure to conform to "normative rules that introduce a prescriptive, evaluative, and obligatory dimension into social life" (Scott, 2001: 54). The rules concern outputs (e.g., product safety), techniques and procedures (e.g., due process), and categories and structures (e.g., specialist hospitals) (Scott, 1987; Suchman, 1995; Ruef and Scott, 1998). Activists and social movements are sources of new normative rules, as they turn their attention to organizational practices in conflict with their norms and values (Davis, Diekmann, and Tinsley, 1994; Hoffman, 1999; Schneiberg and Soule, 2005), but normative legitimacy is usually based on conformity to stable and broadly accepted cultural values (Friedland and Alford, 1991; Jepperson, 1991; Clemens and Cook, 1999; Johnson et al., 2006).

When values are not fully internalized, organizational conformity to cultural values is held in place by the costs of losing legitimacy (Scott, 1987). First, transaction partners may punish an offending organization by imposing costs on it to ensure that does not repeat its illegitimate actions (Friedman, 1971; Green and Porter, 1984; Fudenberg and Maskin, 1986). Claims for restitution and damages fall under this category of behavior. Second, public condemnation is a way to demonstrate distance from it and encourage others to punish or condemn it. Third, transaction partners can respond by

avoidance, which is a culturally typical reaction to stigmatization of a social actor (Goffman, 1963; Carter and Feld, 2004; Pozner, 2008; Pontikes, Negro, and Rao, 2008). For example, the withdrawal of transactions is a common reaction to a firm's bankruptcy even when the transaction partner bears no risk, as when suppliers withdraw even though they are offered cash on delivery (Sutton and Callahan, 1987). Avoidance is an "exit" strategy rather than a "voice" strategy and is easy to choose because it is inexpensive (Hirschman, 1970). In some cases, such as the mutual funds that we studied, audience members cannot easily punish or condemn an organization, making avoidance the only possible negative reaction.

For individuals and organizations in exchange relations with organizations that have lost legitimacy, avoidance can be justified in multiple ways. First, it could be motivated by fear that one could become a future victim of wrongdoing. The assumption of behavioral consistency underlying "the fundamental attribution error" (Nisbett and Ross, 1980) will lead audiences away from contextual explanations of the deviant act and toward an attribution to some stable characteristic of the target organization (Tetlock, 1985; Arthaud-Day et al., 2006), suggesting that it may be risky to continue the exchange relation with it. Second, if the association with the deviant organization is publicly known, avoidance can be caused by a concern that continued association with the transaction partner can lead to reduced legitimacy for the focal organization (Jensen, 2006). "Because legitimation is frequently mutualistic, the risk of negative contagion may drive long-standing allies to dissociate themselves from a troubled counterpart" (Suchman, 1995: 597). Third, even an association that is not publicly known can be terminated by transaction partners who make ethical demands and reason according to rules of appropriateness (March, 1994), as they may be willing to tolerate the potential loss from dissociation in order to shun an organization that they see as deviant. In competitive markets in which actors offer similar terms, avoiding a compromised actor may even be a low-cost behavior. Although institutional theory suggests several reasons for why actors shun an offending organization, a less investigated question is why and how innocent organizations also can lose legitimacy.

Organizational Categorization and Legitimacy Loss

Individuals make sense of the world by grouping social actors such as individuals, groups, and organizations into categories (Turner, 1985; Tajfel and Turner, 1986). These categories are schemas (Taylor and Crocker, 1981) applied to social actors and are based on abstract prototypes and recalled exemplars of individual actors viewed as typical of the category. Successful classification of a social actor into a category enables the individual to "fill in" missing information about the actor by drawing on knowledge of typical attributes of category members, infer behaviors that are typical of category members, and even make evaluative judgments based on the individual's view of the category (Ashforth and Humphrey, 1997). Thus social identities are cognitive simplifications that deindividuate the target actor by applying knowledge and

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inferences about a category instead of direct perception of the individual's attributes (Turner, 1985; Hamilton, Sherman, and Ruvolo, 1990; Hogg, Terry, and White, 1995).

The cost of categorization is that variance within the category is overlooked. Because social identities can shape interactions in such a way that it becomes beneficial for an actor to act according to the classification that others impose, they create incentives to reduce behavioral variation within frequently evoked categories. Thus, although assignment into a denigrated social category results in disadvantageous treatment, behaving in ways that contradict the category assignment may be worse because it can trigger sanctions instead of reclassification (Johnson et al., 2006; Hannan, Pólos, and Carroll, 2007: 96–97). Even failure to fall into a clear category can have costs, because mediators who explain products to audiences and judge their value will avoid ambiguous cases or evaluate them negatively (Zuckerman, 1999; Zuckerman and Kim, 2003; Hsu, 2006a, 2006b). Following this reasoning, organizational forms have been defined as externally imposed identities consisting of diagnostic characteristics and expected values on these characteristics (Pólos, Hannan, and Carroll, 2002). Organizational form affects generalization because forms are categories of presumed similar organizations, so an action performed by one member of an organizational form can be inferred to be likely by other members. Although the organizational form is defined by generalization from its member organizations, its establishment as a social category makes it available in schematic form (Hannan, Pólos, and Carroll, 2007; Yu, Sengul, and Lester, 2008).

Establishing an organizational form as a social category creates a path of generalization that can be used when new information becomes available. Newly observed actions and attributes of members of the organizational form can then be coded as a property of the form rather than as specific to the member (Yu, Sengul, and Lester, 2008). Coding new attributes at the form level is efficient because it is easier to remember schema-relevant information (Hastie, 1981). Also, if the new information concerns negatively valued actions, the perceived risk of becoming a future victim activates a schema change, because individuals pay greater attention to actors that affect their welfare (Erber and Fiske, 1984). Thus the establishment of an organizational form as a social category changes the reaction to deviant actions by a member organization, because now an association of the organizational form with the deviant action is possible. When a single act of organizational deviance surprises audience members, they will engage in sensemaking followed by generalization. Through generalization, a deviant act by a single organization can cause loss of legitimacy for organizations of the same form.

A spreading loss of legitimacy was vividly displayed in the rapid transition of public discourse from the insufficient auditing done by the Houston office of Arthur Andersen to a broader discussion of the need for a reform of the entire auditing industry. It was also displayed in the Ohio Savings and Loan (S&L) crisis, which involved a financial shock with indications of malfeasance and triggered runs on S&Ls in

many other states as well (Cooperman et al., 1995). Such generalization is cognitively easy, and it does not require any external evidence that the generalization is valid. Organizations do not have effective responses to the implicit accusation because they are faced with the task of proving that they are not secretly involved in deviance now and will not be involved in the future. A vigorous defense may even be viewed as suspicious because the organization is seen as protesting too much (Ashforth and Gibbs, 1990). It is also unlikely that audience members will discover on their own that the organization is not guilty of wrongdoing, because by avoiding it they become less able to learn about its behaviors (Denrell and March, 2001; Denrell, 2005).

Loss of legitimacy is not necessarily limited to members of the same organizational form. Although different organizational forms are made distinct by the intersection of their characteristics, they share characteristics as well. Though a shared organizational form offers the most compelling path of generalization, shared characteristics offer an additional path of generalization that has wider reach. Individual organizations can be viewed as belonging to an organizational form to different degrees depending on their match with the characteristics that define the form (Ruef, 2000; Hannan, Pólos, and Carroll, 2007: 39–47). Organizational forms can be compared based on the similarity of characteristics that define the forms or the actual distribution of characteristics of organizations that belong to one of the forms. For example, although banks and life insurance companies can be distinguished by asking whether they offer deposit accounts, they have the shared characteristics of offering investment products. While distinct characteristics reduce the potential for generalization across forms, shared characteristics link organizational forms and create potential paths for generalization (McKendrick et al., 2003). Through comparison of shared and distinct characteristics, organizational forms come to be seen as having proximities in the space of social characteristics (Carroll and Hannan, 2000: 76–78; Ruef, 2000). Generalization is made more likely by a greater number of shared characteristics and less likely by a greater number of distinct characteristics (Tversky, 1977; Baron, 2004; Dobrev, Ozdemir, and Teo, 2006).

Audience members use schemas to organize their everyday knowledge of organizations based on characteristics that are made salient by media and advertisements (Roehm and Tybout, 2006) as well as characteristics that are available from hearsay and their own interactions with organizations. When engaging in social cognition, audience members choose easily accessible information even when it is not necessarily the most diagnostic (Sherman, Judd, and Park, 1989; Hogg, Terry, and White, 1995). Even managers, who have a professional interest in correctly classifying organizations, prefer easily available characteristics such as product range, size, and performance (Porac et al., 1995; Clark and Montgomery, 1999). Reliance on easily available information produces overgeneralization because it leads audiences to overlook differences that would have cast doubt on the generalization (Sherman, Judd, and Park, 1989). For example, our empirical case involves similarity judgments based on the parent firms

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of mutual fund providers. Availability is clearly at work here, because the parents are well-known firms, but a bias is also evident because the generalization overlooks that the subsidiaries are in a different business than their parent firms and are actually less similar to each parent firm than they are to each other. Logically this would suggest that legitimacy loss would transfer to none of the subsidiaries or equally to all, but when audiences categorize subsidiaries of well-known organizations, the parent firms' characteristics are likely to outweigh those of the subsidiary. Easily available information thus is used instead of diagnostic information, leading to overgeneralization. In this way, organizations that did not commit the original wrongdoing are affected, even if they are not in the same market. Based on these arguments, we make the following predictions:

Hypothesis 1: Reported deviance by an organization will initiate withdrawal from transactions with organizations of the same form.

Hypothesis 2: Reported deviance by an organization will initiate withdrawal from transactions with organizations that share easily available characteristics with the deviant organization.

Though ecological theorizing on audiences' generalization focuses on the shared characteristics of organizations, audience members' attention is also primed by characteristics of the deviant action. Priming of specific characteristics makes generalization more likely by creating paths of accessibility in the mind of the audience (Ahluwalia, Rao, and Burnkrant, 2001; Roehm and Tybout, 2006; Lei, Dawar, and Lemmink, 2008). If the deviant action is related to an important characteristic in the identity of a given organizational form, then it will be seen as highly diagnostic of that organizational form. The loss of legitimacy will then generalize even when the actions were performed by organizations belonging to other organizational forms. For example, a case of meat being used past the expiration date in a restaurant is potentially harmful to hamburger restaurants because meat is so central to their identity. That would be true even if the expired meat were served in a different type of restaurant. Audiences may simply associate meat and hamburgers or may reason that expired meat is a likely problem in hamburger restaurants because the incidence reveals a problem with how meat is handled in restaurants more generally. Hence the legitimacy loss will generalize to organizational forms having characteristics that are associated with the deviant act:

Hypothesis 3: Reported deviance by an organization will initiate withdrawal from transactions with organizations that share characteristics with the deviant act.

Finally, status may influence whether an organization experiences withdrawal in response to deviant actions by another firm. Status is audiences' beliefs about the quality of goods or services provided by a given organization (Podolny, 1993). It influences markets by causing a preference for the higher-status organization, holding constant the objective quality, which is imperfectly known to audience members. A key finding of status research is that higher-status actors not only reap greater rewards for a given level of quality, but also for a

given increase in the quality level (Benjamin and Podolny, 1999). This is a positive interaction effect between quality and status that, conversely, means that high-status actors also bear a greater penalty for a given decrease in the quality level (Rhee and Haunschild, 2006). The mechanism behind the high penalty for deviance for high-status organizations is that a given action is seen as more deviant when the audience has high expectations for the actor (Burgoon and LePoire, 1993). Whereas an adverse signal such as low performance is expected from a low-status organization and thus is not informative, it is unexpected and potentially useful for revising beliefs about the quality of a high-status organization. Thus the high expectations set the organization up for a greater fall, as has been shown for automotive quality ratings (Rhee and Haunschild, 2006) and remuneration of celebrity chief executive officers (Wade et al., 2006).

The argument above applies to organizational reactions to deviance by the same actor who is being evaluated, which calls for caution when estimating the effect of deviance by one organization on withdrawals from another. The prediction only transfers if audience members first code the deviance as having (potentially) occurred in all organizations similar to the perpetrator and then adjust their behaviors, taking the status into account. If audience members take status into account when coding to which organizations the deviant act may potentially apply, high-status organizations may instead avoid legitimacy loss. This can happen because confirmatory bias causes audience members to give high-status organizations the benefit of the doubt (e.g., Nisbett and Ross, 1980: 181–182; Yu, Sengul, and Lester, 2008). To preserve the belief that a high-status organization is better than the low-status one, audience members may code evidence of deviance as relevant to a low-status target organization, which is already under the shadow of doubt, and as irrelevant to a high-status organization. Similarly, high-status organizations maintain greater distinctiveness, which makes them less susceptible to similarity-based contagion than low- or middle-status organizations (Phillips and Zuckerman, 2001). Thus high-status organizations will bear less of the perceived blame for the act of deviance. If status is taken into account at the coding stage, it should insulate organizations from blame:

Hypothesis 4: Reported deviance by an organization will initiate more withdrawal from transactions with low-status organizations.

A straightforward test of hypotheses 1 through 4 is to examine withdrawals by existing exchange partners, but it is also important for the argument that the loss of legitimacy makes it difficult for organizations to replace the lost exchange partners with new ones. Although current exchange partners pay more attention to the behaviors of a target organization than other audience members, legitimacy is a field-level characteristic of the organizational form only if other audiences make the same judgments. Furthermore, a scandal is likely to bring into question earlier categorization schemes and hence cause increased volatility in market activity—i.e., increased withdrawals *and* entries (Zuckerman, 2004). Thus the theory should also be subject to the stricter test of whether the organizational forms that lose legitimacy experience a net loss

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of business, defined as the difference between new customers and lost customers. Accordingly, we tested these hypotheses on withdrawals by existing exchange partners and net loss of business.

METHOD

The Skandia Scandals

Skandia AB is one of the oldest surviving firms in Sweden, established as a casualty insurance company in 1855. Over the years it diversified into life insurance, unit-linked insurance, mutual fund management, and retail banking. Benefiting from the rising stock markets, by the end of the 1990s Skandia AB had grown into one of the largest global actors in the long-term savings industry. In year 2000, Skandia was valued at over 20 billion USD, making it the second largest Swedish listed firm.

Although Skandia was a hugely popular firm in 2000, media turned critical when Skandia announced the sale of its asset management organization (Skandia Asset Management, or SAM) to the Norwegian bank DnB for SEK 3.2 billion (approximately USD 320 million) in January 2002. The reason for the media outcry was that industry observers felt the sale would indirectly hurt the customers of the life insurance business of Skandia, Skandia Life. The worth of an asset management company is largely determined by its long-term asset management contracts, and it was estimated that two-thirds of the value of SAM came from a contract with the policy holders in Skandia Life. But all proceeds from the sales went directly to Skandia AB rather than to Skandia Life. Although Skandia Life is an incorporated firm, its bylaws stipulate that it is run as a mutual firm, which means that it cannot pay dividend to its owners when there is a surplus but returns all profits to its policyholders. The distribution of the proceeds of the sale was legally correct, and subsequent investigations exonerated Skandia of any wrongdoing, but industry pundits interpreted the SAM deal as a way for Skandia AB to extract assets from Skandia Life, a practice that was widely seen as immoral and opportunistic.

Following this alleged wrongdoing, media began to portray Skandia more negatively. In the April 2002 annual shareholders meeting, Skandia's management incentive programs were intensely debated. A large institutional owner of Skandia AB published a debate article in one of the largest Swedish dailies and stated its intention to vote against the proposed incentive program because it was too expensive and not sufficiently performance-related. The entire spring of 2002 saw scattered media coverage of Skandia and its incentive programs. In October 2002, media focus on Skandia shifted to an issue close to the general public: apartment dealings. The largest Swedish business weekly, *Veckans Affärer*, ran a special investigative issue titled "The Sick Dealings of Skandia—Billion Crown Bonuses and Apartment Dealings." This special issue was followed by other media reports about "apartment dealings" of the management of Skandia AB. In this particular case, the luxury apartment of the financial director of Skandia AB was to be renovated at the expense of Skandia AB without a commensurate increase in the rental

cost. Although this specific renovation was called off due to the bad publicity it generated (Nachemsson-Ekwall and Carlsson, 2004), the media started scrutinizing Skandia AB and subsequently uncovered other apartment dealings. The most frequent type involved top-level managers at Skandia AB providing their children with rental apartments in real estate owned by Skandia—again, a legal practice but a widely denounced one. To place this scandal in context, rental apartments in central Stockholm are extremely difficult to come by. Due to a long history of controlled levels of rent and an earlier state-run queue system in which people would place their newborn in the queue to provide them with a chance of getting an apartment, contracts for rental apartments in central Stockholm are extremely valuable and often carry a hint of patronage. Public outrage concerning the apartment dealings was compounded by the memory of the recent management compensation debate, which created an impression of personal enrichment at the expense of the firm. In November 2002, one of the largest business weeklies reported from a poll of market analysts that most of them had no confidence left for Skandia AB's chief executive officer (CEO), Lars-Eric Peterson.

In March 2003, Skandia Life commissioned an independent investigation into the sale of SAM to DnB by Skandia AB and its impact on Skandia Life. At the April 2003 annual shareholders meeting of Skandia AB, the shareholders forced another independent investigation into the incentive programs and the apartment "scandals" at Skandia AB. CEO Lars-Eric Peterson was fired the next day. In September 2003, the Skandia Life investigation produced allegations of wrongdoing on behalf of Skandia AB in the sale of SAM. In October, the lawyer leading the investigation into the apartment dealings announced as a preliminary finding that the number of hidden deals involving luxury renovations of the apartments of the management of Skandia AB was much higher than earlier reported in media. This drew intense media attention, and the chief prosecutor of Sweden placed the earlier management of Skandia AB under criminal investigation the following week.

The report on the apartment dealings was released at the end of December 2003, at which time media coverage of Skandia peaked. A key finding was that management had extracted larger bonuses than the board had sanctioned, and as a consequence, the chairman of the board resigned and an extraordinary shareholders meeting was called for January 2004. Just before the end of the year, Skandia AB filed a lawsuit against its former CEO, finance director, and the chairman of the board. In January 2004, a public interest group called Public Action against Skandia filed a class action suit against the sale of SAM by Skandia AB. In February 2004, Skandia Life, after pressure from, among others, the consumers' ombudsman, decided to take Skandia AB to arbitration for SEK 2 billion of the 3.2 billion sale proceeds from SAM.

These events caused media attention to Skandia to be significantly higher than normal during 2002–2004. We compared the media attention to Skandia and Handelsbanken, a bank of similar size to Skandia that also had a subsidiary offering mutual funds during this period, and found an

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increase in media mentions unique to Skandia. Public confidence in Skandia AB was seriously eroded by the negative publicity. An annual survey of the perceived quality of firms by Swedish consumers (Swedish Quality Index) reported a drop of confidence in the pension operations of Skandia of almost twenty points from 2000 to 2004, which is the largest recorded drop in confidence ratings by any firm since measurement began in 1988. Partly as a consequence, Skandia AB was acquired by the South African insurance firm Old Mutual in 2005.

It is important to note that all the scandal events revolved around only a few individuals at the helm of Skandia AB—the CEO, the finance director, and a few other managers. None of the board members or managers of the subsidiaries of Skandia, such as Skandia Life or the asset management firm, SAM, were implicated in these stories. Nor was the buyer of SAM, DnB, responsible for the way that Skandia AB handled the proceeds from the sale. News stories of apartment dealings did not surface for any mutual fund management firms, nor could they, because mutual funds cannot own real estate in Sweden.

The risk of spillover from a scandal is related to the social standing of a deviant actor (Adut, 2005) and the degree to which a deviant organization is core to the form and therefore seen as typical (Ruef, 2000). Skandia is a core member of the casualty insurance firm organizational form. As one of the earliest insurance firms that grew to significant size, it took part in defining the industry, and it can even be argued to be constitutive of the insurance firm organizational form. Thus in our first hypothesis of within-form contagion, we predicted more withdrawals from mutual funds sponsored by subsidiaries of other insurance firms.

We further test the theory by including the characteristics that are seen as salient to the scandal and that can cross organizational forms when intersecting with properties of the organizational form. The deviant acts of the top managers of Skandia AB relate to two different organizational properties. First, there was a reported diversion of assets from the firm managing the pension savings of Skandia—the controversial sale of SAM. Although the diversion was legal, the media interpreted this sale as negatively affecting the pension savers of Skandia (but not of any other firms). In line with our reasoning about the role of the scandal's characteristics, media attention made the characteristic of providing pension savings products a central characteristic of the deviance. Later, there was reported misallocation of apartments, which in a similar manner made the real estate business a central characteristic. Clearly, the real estate industry was concerned about the possibility of such contagion, as evidenced by the response of the Swedish Real Estate Association, which held a workshop on how to contain the Skandia "apartment scandal" and also issued several press releases (article in *Svenska Dagbladet*, Nov. 3, 2003).

If the characteristics of these actions channeled generalization, the loss of legitimacy would transfer more readily to the mutual fund subsidiaries of pension funds and firms owning real estate. We examined both of these dimensions.

We analyzed the first at the organizational form level by examining whether subsidiaries of pension fund management firms were affected more strongly by the news of the scandals. We analyzed the second at the individual firm level by examining whether mutual fund subsidiaries of firms with more real estate holdings among their investments were affected more strongly by the news of the scandals. Finally, Skandia's size was a salient characteristic of the firm and may have evoked an image of a privileged "establishment" of large organizations. Because many other large financial firms had subsidiaries that managed mutual funds, we also investigated size as a similarity characteristic that led to the transfer of legitimacy loss.

Sample and Data Sources

We obtained data on mutual fund transactions from the Swedish public pension authority Premiepensions Myn-digheten (PPM), which manages the system of mandatory individual pension savings that is a part of the new Swedish pension system. We examined mutual fund transactions in 20 fund families that operate in the Swedish market for Premium Pension mutual funds. Our sample of fund families includes all insurance firms, all pension firms, three out of four large banks, and a random sample of independent and foreign parent fund families. In all, these firms represent about half of the firms operating in the market for Premium Pension funds in 2003. We stratified the sample by organiza-tional form to compare the effects of the scandal on all organizational forms with subsidiaries offering mutual funds, though some forms had fewer members than others. Our sample has all organizational forms with subsidiaries offering mutual funds through PPM, and most out-of-sample firms are independent and foreign parent firms, which are the most numerous organizational forms in this market. Our data captured all PPM managed assets and transactions in the sample funds and none of the assets and transactions made directly between the mutual fund management firms and customers. Hence all data are pension savings of individual Swedish employees.

In the year 2000, the Swedish mandatory pension system was changed from fully state managed to a defined contribu-tion system in which the individual is expected to actively manage a small part of his or her pension (Sunden, 1998; Horngren, 2001). Two and a half percent of the annual income of every working Swede is put into an individual account, from which the person invests in a set of mutual funds. These mutual funds, although technically identical to "normal" mutual funds, are treated as separate funds for tax purposes. All funds are registered with PPM, which acts as an interme-diary between the individual investor who controls an account with accumulated pension rights and the mutual fund management firm that has a fund registered with the PPM system. The pension rights of an individual must be fully invested at all times—there is no provision for directly holding cash in the system, but it is possible to hold money-market fund shares. As a result, all sales of funds in the PPM system are simultaneously purchases of shares in other funds.

When individuals want to invest their newly credited pension money in funds or change the funds they are currently

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invested in, they contact PPM and register the desired trade. There are no fees for trades within the system, except when there are specified entry or exit loads of a particular fund, which is unusual. There are multiple ways of registering trades, including a popular online system. PPM accumulates the daily trades per fund, executes these as batch orders, and keeps records of the transactions. The mutual fund management firm thus does not know the identity of each investor; only PPM has this information.

From PPM, we received trading data per mutual fund at the level of the daily transaction, including its exact timing and magnitude, from October 2000, when the system became operational, to September 2006. Because the use of PPM service firms, which are brokers that manage the PPM portfolio of an individual for a fee, became more common during the latter part of 2004, we only analyzed the period until December 31, 2004. We also received information on the performance of the various mutual funds, their category, size, and the loading and management fees. This dataset is unusually comprehensive and is particularly suitable for our purposes because it includes a cross section of individuals in the economy. Because our data are mandated pension savings, they include not only the highly motivated traders who seek out a fund manager or a bank to invest money in mutual funds but also persons who are not interested. There is an option of not picking specific funds but, instead, being allocated to a fund-of-funds (Premiesparfonden) managed by PPM, and the individuals holding this fund are not in our data. This fund is strictly for non-choosers: money that an individual has allocated to a specific fund cannot be moved to this general fund. Of the 12 million individuals with pension rights over the period 2000–2004, 2.3 million (or about 20 percent) have invested in the default PPM-run fund-of-funds. This corresponds quite closely to the “average” degree of active interest in investment outside the PPM system, because about 80–85 percent of Swedes have money in mutual funds outside the PPM system. The investors who have picked a fund but are not highly interested tend to be inert: they rarely trade. This means that any reactions we find in these data should be stronger in a “normal” setting, in which most of the investors have made an active choice to invest in a mutual fund. A further advantage with our data is the lack of taxation effects from sales, which otherwise may influence the timing of mutual fund flows (Bergstresser and Poterba, 2002).

We analyzed data of all 205 PPM funds that belong to the fund families in the sample. We analyzed only transactions initiated through personal accounts, not the automatic transactions initiated by the PPM system when new pension money is allocated. We did not analyze the initial period of the PPM system (Oct.–Dec. 2000), or the first 60 days of any fund, to eliminate the settling-in period when the pension money was initially allocated and a new fund became available. With these exceptions, we used all available observations.

Variables

Dependent variables. We used two dependent variables: *weekly sales* and *weekly net flows* (buys minus sells).

The weekly sales are defined as the logarithm of the total sale amount in Swedish Kronor (plus one, because sales can equal zero) of the focal fund. These are sales from the investor's point of view and hence are transaction withdrawals from the fund manager's point of view. We took the logarithm because the distribution is skewed, and a logarithmic response function fits the data better than a linear one. Similarly, for the net transactions variable, both tails of the distribution are heavy. To address this problem, we used a logarithmic transformation on each side of zero but preserved the sign. That is, if the untransformed variable was x , our variable would equal $\text{sign}(x) \times \ln(\text{abs}(x) + 1)$.

Hypothesis-testing variables. We tested our hypotheses about how withdrawals from Skandia funds spread to other fund families by observing how the Skandia scandals were reported in the media and analyzing investors' reactions to this information flow. To assess the amount and tenor of media coverage of Skandia, we coded news reports from the most widely read daily business newspaper, *Dagens Industri*, and the most widely read daily general newspaper, *Dagens Nyheter*, from December 1998 through December 2004. Sweden has high public trust in newspaper content (Holmberg and Weibull, 2005), and the high circulation and trust in these two newspapers mean that they set the agenda for other media as well. Our choice of newspapers as a data source is based on the central role of the general press in shaping the attention of audiences (Warner and Molotch, 1993; Deephouse, 2000; Breiger, 2005; Rindova et al., 2005; Tetlock, 2007). While specialized actors such as stock analysts and rating institutes (Zuckerman, 1999, 2000) have a narrowly defined field of interest, the general press can question the practices of any organization. It can also reach audiences that do not seek out specific types of news and thus has an ability to place a news item on the agenda of audience members who would ordinarily be inattentive (Baum, 2002). These characteristics make the general press a key arena for the construction of social problems with a strong impact on its own and cascading effects on other arenas such as politics and law (Hilgartner and Bosk, 1988).

Two coders working independently coded each occurrence of the phrase "the Skandia scandal," which the press used to refer to these events, and our main independent variable is the weekly count of newspaper mentions of "the Skandia scandal." As a sensitivity test, we also estimated the models using an alternative measure that gave the average tenor (degree of approval) of all articles in a week. This measure is inferior because the averaging removes the information on the number of critical articles, but the models with this measure reproduced most of the results in the main analysis. To test the effect of size-similarity (hypothesis 2), we coded the size of the mutual fund firm as the total assets under management (i.e., not only assets under management in the PPM system) from a database maintained by MoneyMate (Sweden), an independent industry observer that provides investor data. These data were then used to construct a variable set to the square root of the size difference of the focal firm and Skandia.

Legitimacy Loss

To test the effect of the scandal's characteristics (hypothesis 3), we coded the percentage of real estate holdings to the total assets held by each parent corporation. The mutual funds in our data do not hold real estate, nor do the mutual fund management firms, so the real estate holdings belong to a parent or sibling of the mutual fund management firm in the corporate structure. The data were collected from the statistics of the Swedish Financial Supervisory Authority and the Swedish Insurance Association and were updated annually. Though ordinary pension savers do not keep these figures in mind, the media coverage of the Skandia apartment dealings, when explaining that Skandia had significant real estate holdings, typically also mentioned which other firms were significant players in the real estate market, thereby possibly linking those firms to the scandal. Thus an interaction of Skandia scandal mentions and the percentage of real estate holdings of the focal firm captures whether firms with more real estate holdings were judged to be closer to the scandal. Co-mentioning does not mean guilt, but the other real-estate-holding firms were certainly scrutinized in the hope of unearthing another Skandia scandal. The closest we came to finding a "spin-off" story was one article in December 2003 reporting that a prominent insurance firm had rented apartments to its employees, though without implying any misconduct with respect to the rents or apartment management. We also coded four news stories that sought to link two other firms in the data with practices similar to those in the Skandia scandal and tested whether these specific news stories affected their sales, without getting supporting results.

To investigate the moderating role of status in the scandal's spillover (hypothesis 4), we collected data on consumer quality ratings of the firms in the sample from the Swedish Quality Index (SQI) rating. SQI is an independent quality-rating institute that carries out consumer surveys on industry sectors to measure consumers' perceptions of quality in various dimensions. The quality index is constructed on the basis of an annual survey of 4,500 individuals using a partial least squares analysis (see Cassel and Eklöf, 2001). Quality ratings are available for all Swedish banks and insurance firms from 1998 onwards. When the rating was missing, we set it to the mean and set an indicator variable for missing rating to one. The definition of status as the audience's beliefs about the quality of goods or services provided by a given organization (Podolny, 1993) matches our measure well, particularly because the objective quality of the product is difficult to assess for financial firms.

Control variables. We included some control variables that may be related to buy and sell activity in mutual funds (e.g., Sirri and Tufano, 1998; Del Guercio and Tkac, 2002; Barber, Odean, and Zheng, 2005). *Ln value* is the logarithm of the fund size in Swedish Kronor. *Monthly yield* is the most recent monthly yield, in percent, of the fund. *Ln trend* is the logarithm of a calendar day variable, and *Ln fund tenure* is the logarithm of the time in days that the fund has existed in the PPM system. Fund type is captured through the indicator variables *interest bearing*, *mixed*, and *generational*

(the omitted category is *equity*). Fund focus was coded through the indicator variables *Europe*, *other region*, and *industrial* (the omitted category is *Sweden*). Tables 1 and 2 show the descriptive statistics and correlation coefficients, respectively, of the variables used in the analysis.

Model

Modeling mutual fund flow is often done through successive cross-sectional regressions with fund characteristics such as past performance, investment style, and fee as independent variables (Fama and MacBeth, 1973; Berk and Green, 2004). Our question concerns the effect of new information (i.e., news about deviance) on the flow of money to mutual funds rather than the average influence of, for instance, fee or performance. This brings our modeling needs closer to another line of finance studies that investigates the effect of new information on investor behavior (cf. Maheu and McCurdy, 2004). As in this literature, we need models that capture the effects of news items on the demand for a security over short time periods. Although the supply of stock is constant in the short term, making price changes the best measure of demand changes, the supply of open mutual fund shares is elastic, making fund inflows and outflows the best measure of demand changes.

Table 1

Descriptive Statistics (N = 35,324)				
Variable	Mean	S.D.	Min.	Max.
Ln weekly sales	10.212	3.198	0	17.265
Ln weekly net	-2.380	10.337	-17.00	17.754
Ln assets	17.705	2.308	7.909	22.088
Interest bearing	0.163	0.370	0	1
Generational	0.123	0.329	0	1
Mixed	0.058	0.234	0	1
European	0.120	0.325	0	1
Other region	0.363	0.481	0	1
Industrial	0.088	0.283	0	1
Monthly yield	-0.003	0.057	-0.287	0.568
Pension	0.112	0.316	0	1
Insurer	0.229	0.421	0	1
Big bank	0.331	0.471	0	1
Small bank	0.068	0.251	0	1
Independent	0.096	0.295	0	1
Trend	6.577	0.635	4.585	7.307
Ln fund tenure	6.425	0.712	4.174	7.286
Asset difference	3.550	3.022	0.783	10.077
Real estate	0.020	0.026	0	0.063
Quality rating	-0.658	2.808	-8	7
Scandal count, lag 1	0.538	1.051	0	5
Scandal count, lag 2	0.538	1.051	0	5
Scandal count, lag 1 × Asset difference	1.916	5.171	0	45.259
Scandal count, lag 2 × Asset difference	1.916	5.172	0	45.259
Scandal count, lag 1 × Real estate	0.010	0.034	0	0.315
Scandal count, lag 2 × Real estate	0.010	0.034	0	0.315
Scandal count, lag 1 × Quality rating	-0.476	3.869	-32	35
Scandal count, lag 2 × Quality rating	-0.476	3.869	-32	35

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Table 2

Correlation Coefficients											
Variable	1	2	3	4	5	6	7	8	9	10	11
1. Ln weekly sales											
2. Ln weekly net	-.29										
3. Ln assets	.65	-.26									
4. Monthly yield	.07	.14	.00								
5. Pension	.16	-.06	.26	-.01							
6. Insurer	.06	-.08	.15	-.01	-.19						
7. Big bank	.07	.07	.14	-.01	-.25	-.38					
8. Small bank	.05	-.03	.03	-.01	-.10	-.15	-.19				
9. Independent	-.00	.06	-.12	.03	-.12	-.18	-.23	-.09			
10. Trend	.18	-.15	-.06	.16	-.03	-.04	-.04	-.02	.02		
11. Ln fund tenure	.34	-.23	.23	.13	.00	-.01	-.02	-.01	-.06	.87	
12. Asset difference	.10	.10	.15	.00	-.22	-.42	.92	-.15	-.20	-.02	-.01
13. Real estate	.08	-.09	.21	-.03	.11	.69	-.13	-.22	-.26	-.09	-.05
14. Quality rating	-.03	.09	-.05	-.00	-.07	-.16	.03	.06	.08	-.09	-.08
15. Scandal, lag 1	.14	-.03	-.00	.07	-.01	-.01	-.02	-.01	.01	.41	.36
16. Scandal, lag 2	.14	-.04	-.00	.10	-.01	-.01	-.02	-.01	.01	.42	.36
17. Scandal 1 × Asset	.14	.03	.06	.05	-.08	-.13	.27	-.05	-.06	.30	.27
18. Scandal 2 × Asset	.15	.02	.06	.07	-.08	-.13	.27	-.05	-.06	.31	.27
19. Scandal 1 × Real	.12	-.06	.08	.03	-.01	.23	.00	-.08	-.09	.23	.21
20. Scandal 2 × Real	.12	-.06	.08	.05	-.01	.23	.00	-.08	-.09	.23	.21
21. Scandal 1 × Qual.	-.05	.08	-.04	-.01	-.09	-.14	.10	.03	.04	-.11	-.11
22. Scandal 2 × Qual.	-.05	.08	-.04	-.02	-.09	-.14	.10	.03	.04	-.11	-.11
Variable	12	13	14	15	16	17	18	19	20	21	
13. Real estate	-.28										
14. Quality rating	-.03	-.26									
15. Scandal, lag 1	.00	-.04	-.04								
16. Scandal, lag 2	.00	-.04	-.04	.44							
17. Scandal 1 × Asset	.32	-.07	.04	.72	.32						
18. Scandal 2 × Asset	.32	-.07	.04	.32	.72	.49					
19. Scandal 1 × Real	-.05	.32	-.22	.57	.26	.33	.14				
20. Scandal 2 × Real	-.05	.32	-.22	.26	.57	.14	.33	.54			
21. Scandal 1 × Qual.	.08	-.18	.51	-.24	-.01	-.05	-.01	.50	.26		
22. Scandal 2 × Qual.	.08	-.18	.51	-.10	-.24	-.01	-.05	.26	.50	.53	

Time series of securities demand have serial correlation, which we modeled through an autoregressive model with first- and second-degree terms, an AR(2) model, to capture that the dependent variable in each period is affected by its own first and second lags. They also have persistence in the volatility term, which means that the error term is affected by its own lagged value. We modeled this through a GARCH (1,1) specification of the volatility (Bollerslev, 1986). We used preliminary testing to verify that the AR(2) model with two autoregressive terms fit better than the AR(1) and no worse than the AR(3). Models replacing the autoregressive terms with moving-average terms had worse fit than the autoregressive model. We estimated a GARCH(2,1) model and found that it had significantly better fit than GARCH(1,1) in a likelihood ratio test, but the improvement in fit was too slight to yield increases in fit criteria with penalties for added variables

(BIC or AIC). The coefficient estimates were robust over a wide range of model specifications. The final model is:

$$y_t = \beta X_{t-1} + \rho_1 y_{t-1} + \rho_2 y_{t-2} + \varepsilon_t \sigma_t \quad (1)$$

where y is the dependent variable, X are the covariates with associated coefficients β , and ρ_1 and ρ_2 are the autocorrelation coefficients, as in the usual AR(2) autoregressive model. The residuals ε are multiplied with the volatility term σ specified as:

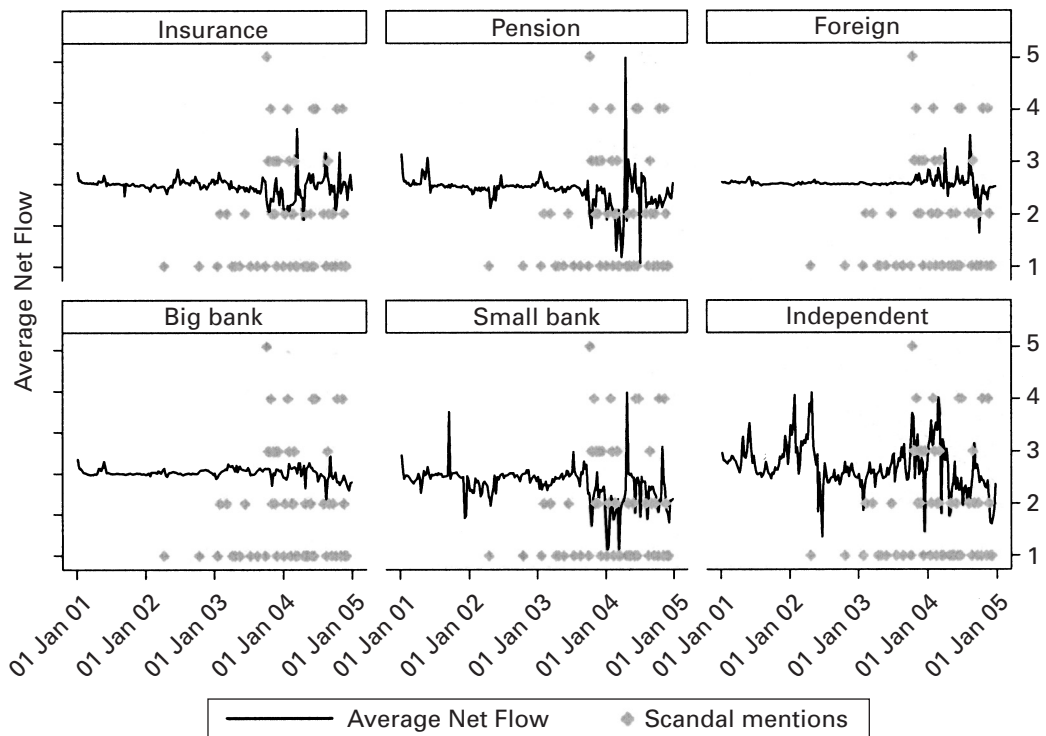
$$\sigma_t^2 = \omega_1 + \omega_2 \varepsilon_{t-1}^2 \sigma_{t-1}^2 + \omega_3 \sigma_{t-1}^2 \quad (2)$$

Hence, the time series has persistent expectation through the autoregression term and persistent volatility through the GARCH term. The estimates are obtained by the *arch* command in Stata. In preliminary analysis, we found that the results did not depend on the modeling framework, as we got the same results and high significance levels with linear random and fixed effects models. But the models displayed in the table have more accurate estimates of the standard errors because they capture the autocorrelation and volatility persistence found in financial time series.

RESULTS

To illustrate the movement of funds during the sample period, the net investment flows per organizational form are given in figure 1 (the insurance graph excludes Skandia to isolate the effect on other insurance firms). The graphs show the net

Figure 1. Net investment flows per form of fund management firm.



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flow, defined as buy volume minus sell volume (top line, left axis), along with the scandal count (dots, right axis). The graphs suggest that the news accounts of the Skandia scandals led to sell-offs of funds managed by other insurance firms and perhaps also of funds managed by pension firms.

Our analysis proceeded as follows. First, we made a preliminary analysis of sales in each organizational form separately. To conserve space, we do not show the tables of this analysis, but we used it to verify that each fund manager type had sufficiently similar results on the control variables that it was possible to combine all fund manager types in a pooled regression analysis. We also used this analysis to examine the lag structure of the effects from the scandals. We found that only the first two lags (previous week and the week before) affected sales, and hence the subsequent analysis uses two lags. Because the data had some banks that were very large (as Skandia was) and some smaller banks, we also separated large and small banks to test whether they were differently affected. The estimates suggested that the large banks were more affected by the Skandia scandal, possibly because of the size similarity. We thought that audience members would not be able to identify the organizational form of foreign mutual fund providers but would instead treat foreign firms as a separate form, and the preliminary analysis did indeed show distinct effects of the scandal on foreign providers. We analyzed Skandia and other insurance firms separately and found a striking similarity in the effects. To focus the analysis on legitimacy loss in firms that were not responsible for wrongdoing, we removed the Skandia funds from the subsequent analysis.

Table 3 is a pooled analysis of sales that gives each organizational form a separate intercept and coefficients for the effect of the press mentions of the Skandia scandal. All variables for scandal counts are interactions of organizational form and the scandal count, and there is no main effect of the scandal count. Hence the coefficient estimates can be interpreted directly as the effect of scandal mentions on the focal organizational form. The coefficient estimates show that press accounts of scandals led to sales in multiple organizational forms. Insurers other than Skandia, pension firms, big banks, and small banks experienced inflated sales for two weeks following press mentions of the scandal. Foreign firms had greater sales two weeks after and thus seem to have been affected later, while independent fund management firms were unaffected. Hypothesis 1 is supported, as other insurance firms than Skandia increased sales (recall that Skandia is not included in the analysis, so the coefficient reflects the effects on the other insurance firms). Hypothesis 2 also receives some support, as the pension funds, which were the most similar organizational form to insurance firms, also had inflated sales. But both big and small banks also had greater sales, which is surprising because banks are rather different from insurance firms. Foreign firms and the independent firms, which are most different, were least affected. The findings can be refined by testing whether pairs of coefficients are equal. There is one for each pair of organizational forms, which is too many to display, so only the significant ones are reported here. The following coefficient differences

Table 3

Fund Sales by Organizational Form*

Variable	Common coefficients	Other insurer	Pension	Big bank	Small bank	Foreign	Independent
Ln value	0.815*** (0.008)						
Monthly yield	-0.483*** (0.145)						
Ln trend	2.454*** (0.059)						
Ln fund tenure	-0.421*** (0.055)						
Constant	-18.190*** (0.201)						
Group intercept		-0.101* (0.060)	0.149** (0.067)	-0.111** (0.054)	0.170** (0.071)		0.701*** (0.067)
Scandal, lag 1		0.025*** (0.008)	0.038*** (0.010)	0.015** (0.006)	0.039*** (0.014)	0.006 (0.016)	-0.015 (0.010)
Scandal, lag 2		0.047*** (0.008)	0.038*** (0.010)	0.044*** (0.007)	0.028** (0.012)	0.041** (0.017)	0.013 (0.014)
Log likelihood	-65173.19						
Likelihood ratio χ^2	65020.43***						
D. f.	29						

* $p < .10$; ** $p < .05$; *** $p < .01$.

* Standard errors are in parentheses. Fund type indicator variables, AR(2), ARCH(1), and GARCH(1) parameter estimates are not displayed.

were significant at the 5 percent level: small and large banks and pension funds had greater sales than independent firms (lag 1), and insurance firms also had greater sales than independent firms (lag 1 and 2). No differences involving foreign firms are significant at the 5 percent level, in large part because these coefficients are estimated with less precision than those of the larger categories.

Table 4 shows the analysis of net fund flows (buys minus sales). The analysis shows inflows into the mutual funds managed by foreign and independent brokers when the scandal was mentioned in the press and hence that the most-different forms from Skandia benefited from the scandal. The analysis shows a net outflow of funds from insurance firms, which share their organizational form with Skandia. Pairwise tests of coefficient differences support these results. When the press mentioned the Skandia scandal, foreign firms had greater next-week net inflows than all other forms except independents (5 percent for all tests except big banks, which had 10 percent). Independents had greater net inflows than insurance firms, pension funds, and small banks (all at 5 percent significance). Insurance firms were worse off than the other forms, though the only significant differences were with foreign firms (5 percent), independents (5 percent) and big banks (10 percent). In the second lag, insurance firms were the only organizational form with a significant and negative coefficient estimate, but due to high standard errors, this coefficient estimate is not significantly different from that of the other organizational forms. These findings support

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Table 4

Fund Net Flows by Organizational Form*

Variable	Common coefficients	Other insurer	Pension	Big bank	Small bank	Foreign	Independent
Ln value	-1.512*** (0.066)						
Monthly yield	7.262*** (0.833)						
Ln trend	-3.705*** (0.342)						
Ln fund tenure	-0.579* (0.328)						
Constant	51.802*** (1.279)						
Group intercept		-0.063 (0.393)	2.603*** (0.489)	2.310*** (0.384)	0.459 (0.482)		1.859*** (0.508)
Scandal, lag 1		-0.003 (0.018)	-0.084 (0.097)	0.067 (0.047)	-0.009 (0.092)	0.287*** (0.109)	0.376** (0.158)
Scandal, lag 2		-0.037** (0.018)	-0.023 (0.097)	-0.071 (0.047)	-0.054 (0.092)	0.087 (0.111)	0.122 (0.164)
Log likelihood	-123287.41						
Likelihood ratio χ^2	17871.60***						
D. f.	29						

* $p < .10$; ** $p < .05$; *** $p < .01$.

* Standard errors are in parentheses. Fund type indicator variables, AR(2), ARCH(1), and GARCH(1) parameter estimates are not displayed.

hypothesis 1 by showing that the firms that were most similar to Skandia were hurt by the scandal. This analysis shows that intermediate forms had net effects that were close to zero even though they had greater sales, suggesting an offsetting increase in buys.

Tables 5 and 6 show models that replace the categorization of organizational forms with interaction variables of the scandal count and organizational characteristics. These models do have main effects for the scandal counts each week, so the interaction variables are interpreted as moderators of the main effect. In each table, variables testing hypotheses 2 through 4 are first entered in separate models and then jointly in model 4. Table 5 shows the analysis of fund sales, which gives clear support for hypotheses 2 and 3. Firms of different size than Skandia experience significantly lower levels of fund sales in the week after scandal mentions, consistent with hypothesis 2, while there is no second-week effect. Firms with high real estate holdings experience significantly more sales in both weeks after scandal mentions, consistent with hypothesis 3. Hence similarity of both the offending firm and the offending event increases the reaction to a scandal. These findings are consistent in the partial and the full models. Contrary to hypothesis 4, however, the findings on the quality rating are insignificant in the partial model and significant in the opposite direction in the full model. The status variable has low correlations with all other variables in the model, so multicollinearity does not account for this finding. The results suggest that high status may instead lead to a backlash when

Table 5

Fund Sales by Organizational Characteristics*

Variable	Model 1	Model 2	Model 3	Model 4
Ln value	0.777*** (0.016)	0.800*** (0.016)	0.800*** (0.015)	0.775*** (0.016)
Monthly yield	-0.509*** (0.143)	-0.521*** (0.143)	-0.515*** (0.144)	-0.505*** (0.143)
Pension fund	0.299*** (0.105)	0.292*** (0.107)	0.239*** (0.076)	0.519*** (0.093)
Insurer	0.036 (0.097)	0.072 (0.106)	0.001 (0.048)	0.456*** (0.091)
Big bank	-0.677*** (0.121)	-0.073 (0.092)	-0.014 (0.139)	-0.794*** (0.204)
Small bank	0.259** (0.108)	0.228** (0.108)	0.233** (0.093)	0.388*** (0.103)
Independent	0.774*** (0.111)	0.741*** (0.111)	0.750*** (0.096)	0.902*** (0.107)
Ln trend	2.329*** (0.113)	2.411*** (0.113)	2.391*** (0.112)	2.339*** (0.113)
Ln tenure	-0.285*** (0.105)	-0.360*** (0.105)	-0.346*** (0.105)	-0.289*** (0.105)
Asset difference	0.0523*** (0.0107)			0.0592*** (0.0117)
Real estate holdings		-3.440*** (1.007)		-3.239*** (1.024)
Quality rating			-0.020*** (0.007)	-0.022*** (0.007)
Scandal, lag 1	0.042*** (0.007)	0.018*** (0.006)	0.030*** (0.005)	0.036*** (0.009)
Scandal, lag 2	0.040*** (0.007)	0.034*** (0.006)	0.045*** (0.005)	0.026*** (0.009)
Asset diff. × Scandal, lag 1	-0.0032** (0.0013)			-0.0034** (0.0014)
Asset diff. × Scandal, lag 2	0.0008 (0.0013)			0.0016 (0.0014)
Real estate × Scandal, lag 1		0.527*** (0.190)		0.555*** (0.209)
Real estate × Scandal, lag 2		0.472** (0.187)		0.684*** (0.207)
Quality × Scandal, lag 1			0.002 (0.001)	0.004*** (0.001)
Quality × Scandal, lag 2			0.002 (0.001)	0.003** (0.001)
Constant	-17.759*** (0.409)	-18.026*** (0.406)	-18.091*** (0.415)	-18.037*** (0.416)
Log likelihood	-63316.41	-63337.45	-63342.00	-63311.94
Likelihood ratio χ^2	21690.4***	21978.3***	21956.8***	21867.9***
D. f.	22	22	22	28

* $p < .10$; ** $p < .05$; *** $p < .01$.

* Standard errors are in parentheses. Fund type indicator variables, AR(2), ARCH(1), and GARCH(1) parameter estimates are not displayed.

a scandal occurs. As noted earlier, this finding would be consistent with a demotion in status that is equally strong for all firms because customers penalize high-status organizations more for status loss (Benjamin and Podolny, 1999; Rhee and Haunschild, 2006). It is inconsistent with status being

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Figure 2a. Multiplier effects of asset difference and scandals on sales.

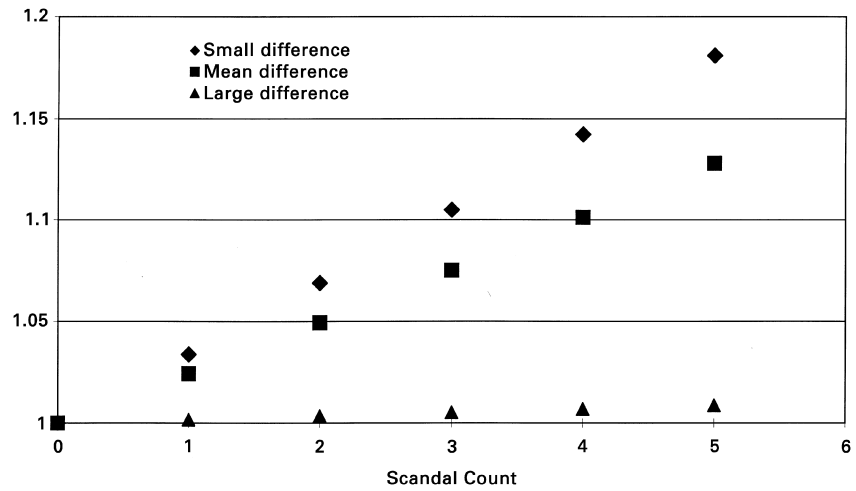


Figure 2b. Multiplier effects of real estate holdings and scandals on sales.

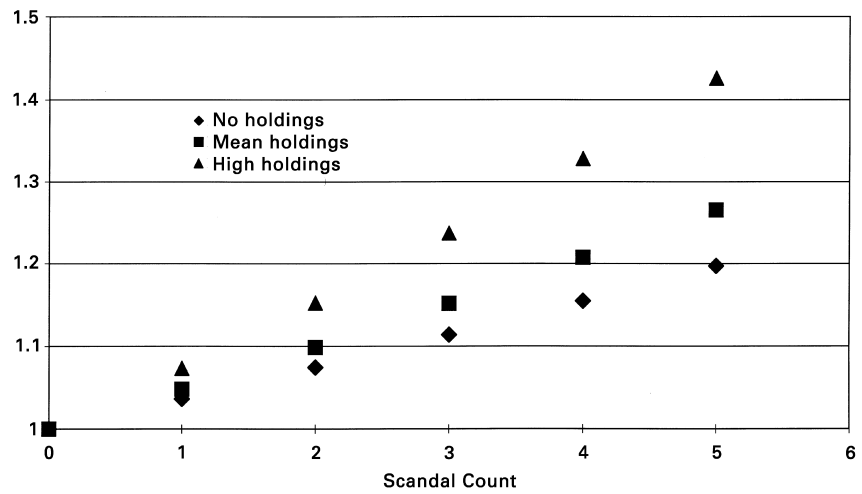


Figure 2c. Multiplier effects of quality ratings and scandals on sales.

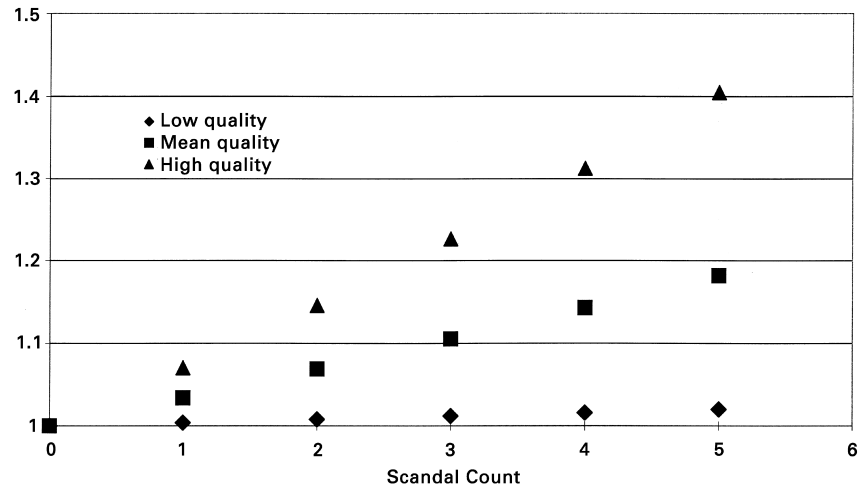


Table 6

Fund Net Flows by Organizational Characteristics*

Variable	Model 1	Model 2	Model 3	Model 4
Ln value	-1.599*** (0.069)	-1.554*** (0.064)	-1.473*** (0.062)	-1.582*** (0.063)
Monthly yield	7.322*** (0.831)	7.178*** (0.827)	7.252*** (0.830)	7.050*** (0.813)
Pension fund	2.935*** (0.476)	3.545*** (0.477)	1.979*** (0.395)	3.740*** (0.418)
Insurer	0.371 (0.390)	1.092*** (0.401)	-2.195*** (0.196)	1.788*** (0.438)
Big bank	-0.527 (0.572)	3.123*** (0.375)	2.526*** (0.738)	0.524 (0.965)
Small bank	0.568 (0.466)	0.380 (0.455)	-0.226 (0.430)	0.345 (0.439)
Independent	2.415*** (0.461)	2.066*** (0.453)	1.718*** (0.432)	2.300*** (0.444)
Ln trend	-4.022*** (0.357)	-3.946*** (0.333)	-3.460*** (0.344)	-3.855*** (0.345)
Ln tenure	-0.119 (0.343)	-0.346 (0.321)	-0.554* (0.325)	-0.061 (0.330)
Asset difference	0.5675** (0.0872)			0.6532*** (0.0734)
Real estate holdings		-22.372*** (3.937)		-14.660*** (3.757)
Quality rating			0.225*** (0.033)	0.259*** (0.032)
Scandal, lag 1	-0.012 (0.028)	0.275*** (0.043)	0.075** (0.034)	0.200*** (0.049)
Scandal, lag 2	-0.035 (0.028)	0.045 (0.043)	-0.019 (0.034)	0.030 (0.049)
Asset diff. × Scandal, lag 1	0.0198** (0.0088)			0.0162** (0.080)
Asset diff. × Scandal, lag 2	-0.0080 (0.0087)			-0.0076 (0.0079)
Real estate × Scandal, lag 1		-6.786*** (1.103)		-7.445*** (1.226)
Real estate × Scandal, lag 2		-1.963* (1.091)		-2.020 (1.231)
Quality × Scandal, lag 1			0.013 (0.009)	-0.021** (0.011)
Quality × Scandal, lag 2			0.004 (0.009)	-0.006 (0.011)
Constant	51.179*** (1.328)	52.456*** (1.235)	51.660*** (1.367)	48.950*** (1.389)
Log likelihood	-120711.37	-120690.45	-120718.60	-120642.09
Likelihood ratio χ^2	16999.8***	17465.7***	17222.1***	17534.0***
D. f.	22	22	22	28

* $p < .10$; ** $p < .05$; *** $p < .01$.

* Standard errors are in parentheses. Fund type indicator variables, AR(2), ARCH(1), and GARCH(1) parameter estimates are not displayed.

used to judge the relevance of the scandal to individual organizations. Hence the finding suggests that beliefs about status are not preserved when scandal events are generalized.

The models estimate the logarithm of sales as a function of the logarithm of the current stock of assets and other covariates,

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which means that coefficient estimates can be interpreted as multipliers of the predicted weekly sales for a fund of given size and other characteristics. This facilitates comparison of the effect sizes, and in figure 2a–2c, we show graphs of the main and interaction effects of scandals for the first lag of the three hypothesized variables. The estimates are based on model 4. As the scale of the vertical axis suggests, the effects are of comparable magnitude. The strongest effects are from real estate holdings and quality, for which five scandals lead to a predicted 40 percent increase in sales in the funds of the firm with the most real estate and highest quality rating. A firm with the greatest size similarity will have an 18 percent increase. These are partial effects of each variable in a full model, so for a similar-size, high-quality firm with real estate holdings, the total effect is the product of these. Such firms are found in the data: in 2003, the insurance firm Länsförsäkringar had a high quality rating, the highest observed value of real estate holdings in the sample, and a size just 10 percent over Skandia. Conversely, the bank FöreningsSparbanken had average quality, no real estate holdings, and was over 20 times the size of Skandia.

Table 6 estimates the same models on net inflows (buys minus sales). The results on hypotheses 2 and 3 are consistent with those in the previous table. Consistent with hypothesis 2, firms that had a different asset size than Skandia had significantly higher net inflows, though only in the first week after the scandal mentions. Consistent with hypothesis 3, firms with high real estate holdings had significantly higher net outflows of funds in the week after scandal mentions (a marginally significant effect in the second week is seen in the partial model 2). The full model shows a result on the quality interaction that contradicts hypothesis 4, as firms that had higher ratings ended up with greater fund outflows. High ratings place the firm in a precarious position in which a hint of deviant behavior, even if it is in a different firm offering the same type of product, is enough to cause an audience to withdraw.

Effect size graphs for net inflows also show similar effects across the different interaction variables, though for inflows the effect size is greater, with multipliers up to 7, and real estate has the smallest effect. Perhaps most interesting is the aggregate effect of these repeated news stories about scandals. During the most active period of the scandal, from March 2003 through February 2004, withdrawals from Länsförsäkringar PPM funds exceeded purchases by 95 million Kronor (12 million USD), which is 2.27 percent of the average PPM assets managed by Länsförsäkringar in the period. These are substantial losses for a firm that is not known to have done anything wrong but just resembles another firm linked to organizational deviance. Moreover, the losses will aggregate over time, because new PPM funds are allocated proportionally to the most recent asset allocation made by the customer, unless the customer explicitly changes the allocation pattern. On the winning side, FöreningsSparbanken gained 199 million Kronor, or 2.53 percent of its average PPM assets.

One possible alternative explanation for our findings is that investors correctly anticipated that the organizations that

were associated with the scandal would have lower returns in the period after the scandal, for instance, due to increased transaction costs or poorer fund management as a result of the withdrawals. Though we find this explanation unlikely because it seems to overestimate the foresight of investors, we tested whether low returns are predicted by the same variables that predict high withdrawals, as investors' foresight then may explain the withdrawal findings. Using daily data on fund values from PPM, we calculated risk-adjusted returns to the investors using the capital asset pricing model (CAPM) (Malkiel, 1995; Carhart, 1997). We then used the risk-adjusted return over periods of 90 days as the dependent variable in regressions in which the independent variables are either indicator variables for organizational form (as in hypothesis 1) or the same set of proximity variables as in our test of hypotheses 2 through 4. Each regression contains one year of returns from the starting point, for a total of four observations of quarterly returns for each fund.

Our analysis (available on request) showed some upturns and downturns in fund returns during the scandal period, but these were always brief and did not fit the prediction that the fund managers associated with the scandal experienced lower returns subsequently. Two of our analysis periods started at times that would have been ideal for an investor to exercise foresight: the initiation of the Skandia investigation in April 2003 and the publication of the Skandia investigation in December 2003. April 2003 turned out to be a very costly time for investors to react to the scandal, as an investor moving from a pension firm to a foreign one in that month would forfeit a run of above-average returns in pension firms in order to get a run of below-average returns in foreign firms. December 2003 was a more typical month, as only one type of fund manager (small banks) had forward returns that were significantly different from zero. As we showed earlier, small banks did not experience significant inflows or outflows. The findings contradict investor foresight as an explanation of fund withdrawals. Likewise, the analysis of proximity variables did not show any systematic results. The interaction with real estate had a positive and significant estimate in April 2003, which is consistent with the high returns of pension funds in this period, but again contrary to the investor-foresight prediction. No other coefficients were significant in these models. The lack of effects of organizational form on returns is not surprising, as it is difficult for fund managers to beat the market and yet more difficult for investors to predict whether fund managers will beat the market.

As a final sensitivity check, we reestimated the models in tables 3 through 5 on data with all the Sweden focus stock funds removed. The logic behind this analysis is that individuals might anticipate that the scandal would reduce the stock value of Skandia and similar Swedish firms and thus would remove their assets from any funds investing in the Swedish stock market. Hence data without these funds will remove this rational reason for withdrawal and capture the pure generalization effect. We found that in this smaller dataset of 144 funds, the findings were preserved for nearly all variables. The exceptions were that the marginally significant second

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lag of quality became fully significant when removing Swedish funds, strengthening the result, while the first lag of asset difference became insignificant, weakening the result. These are very minor differences when removing one-third of the observations and funds from the data (results are available from the authors), so there is no reason to believe that individuals reacted differently to funds with a Sweden focus.

DISCUSSION AND CONCLUSION

Because of audiences' categorization of organizations, deviance by one organization can cause the legitimacy of other organizations to be lost without their deserving it. Categorization and generalization are ubiquitous, but little appreciated aspects of the relationship between individuals and organizations that warrant closer attention. We developed theory of one effect of categorization: how deviant acts lead to loss of legitimacy and subsequent withdrawal from transactions and how this legitimacy loss spreads to organizations that share the organizational form of the original wrongdoer, have similar characteristics, or have characteristics relevant to the deviant act. Our predictions are borne out in a test of how individuals reacted to organizational deviance in Sweden by moving their pension investments. When managers of the insurance firm Skandia were accused of self-dealing, the mutual fund subsidiaries of other insurance and pension firms lost business. Negative audience reactions were limited to the periods of high media attention to the scandal and were directed most strongly to organizations that shared the insurer organizational form with Skandia. But there was also withdrawal of funds from subsidiaries of firms of similar size. Also, because the Skandia scandal involved real estate dealings, other firms with real estate holdings experienced withdrawals from their mutual fund subsidiaries. Because the value of mutual funds is based on the underlying securities and is independent of the management firm's stocks, these investors' movements would be difficult to justify by a concern for future returns, and in fact, there was no evidence of lower returns in the fund managers that saw outflows of investors. The scandals did not cause losses to all mutual fund providers. Consistent with a contagious loss of legitimacy, individuals moved toward the organizations that were the furthest removed from the "guilty," so net investment moved from mutual fund families operated by subsidiaries of Swedish insurance firms to independently operated fund families and fund families operated by subsidiaries of foreign firms.

The findings offer a direct look at how organizational actions contrary to social norms lead to the withdrawal of business from organizations that resemble the offending organization. The analyses show results that closely correspond to effects of the loss of normative legitimacy. First, the withdrawal of business happened as a result of press reports of actions that are deemed immoral, although they had no direct consequences for the audience members. Specifically, there was no actual threat to their mutual fund savings as a result of these events: the apartment deals and overcompensation occurred in a different firm than their mutual fund provider, added up to amounts that had little economic effect even in the firm in which they occurred, and were harmless even for

holders of Skandia-managed funds. More importantly, the wrongdoings of Skandia officials could not devalue mutual funds that were sponsored by other organizations than Skandia. The withdrawal of funds from organizations so distant from the original violator strongly suggests that the generalization behind the audience's reaction does not require visible links between the two organizations: audiences can construct links through association and inference. Second, the withdrawal of business led to responses by a large audience directed at an organizational form (in this case, more than one form). Thus it was a field-level reevaluation of a collective of organizations rather than a reaction against a specific offender. Hence the findings show that audiences are prepared to alter their judgments of the legitimacy of organizational forms in response to actions contrary to social norms.

The findings show a strong effect on withdrawal, suggesting that the loss of normative legitimacy can be a consequential event. For Skandia, it meant the end of its existence as an independent firm, as it is now a subsidiary of Old Mutual. Other insurers also lost significant mutual fund business. The withdrawal events were fairly localized in time, however, giving the impression that the normative legitimacy loss may have been transitory. One possible interpretation is that audiences' reactions to the press wander from issue to issue, as the press does, so that organizations targeted for press critique only pay the price for as long as new articles appear. Nevertheless, it is important to keep in mind that a customer of a mutual fund who has sold all shares is now completely disengaged from it and is unable to withdraw further. If the withdrawals of business are disproportionately from customers who pay more attention to the news reports on the scandals or have a lower reaction threshold, the temporary increase in withdrawals means that the mutual fund now has a smaller customer base that reacts less strongly to organizational deviance than the earlier one, but it still grows at the same rate as before. Thus the period of active withdrawal is transitory, but the effect on the stock of customers lingers on.

It is possible that the customer's reaction is particularly strong in our data because the cost of exiting a relationship is very small in our empirical context. The forgone yield is a possible cost of exiting the relationship with a mutual fund firm, but customers cannot know whether the chosen mutual fund will provide a superior yield. In a context with higher exit costs, we would expect weaker reactions to reported deviance. Even in such a context, however, we would expect similar results if the deviance is considered grave enough. It would also be desirable to track individual customers' movements to tell whether the withdrawals we observed were full or partial withdrawals or whether any of the customers came back. Such information would have been useful in learning more about the audience's heterogeneity in reactions to organizational deviance and investigating the potential for recovering normative legitimacy. Regrettably, our data do not identify individual customers' movements.

Because our analysis captured the effect of deviance in a specific institutional context and time, it could not reveal the impact of contextual differences. For example, it would be

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interesting to learn whether specific instances of deviance would be more or less likely to be generalized if many cases of deviance in different organizational forms are reported at the same time. Although it would be rational to generalize further the more cases are observed, limitations on audiences' attention could instead cause reports of deviance to be overlooked. The comparative rareness of reported deviance in Sweden in this period makes our study one of deviance that seems isolated, but at the same time, it gains salience through its isolation. Likewise, the media most often used by the audience should matter for their ability to pay attention to multiple news stories. Because newspapers are very efficient news sources, the prominence of newspapers in our context would give audiences the ability to monitor multiple cases of deviance at once. Television imposes stronger time constraints, so in contexts in which it is an important news source, as morning news shows are in the U.S. (Baum, 2002), the capacity to pay attention to multiple scandals is lower. It would be interesting to investigate how these differences in the form of news media and news contexts affect audiences' reactions.

Our findings shed light on how individuals categorize organizations. A core proposition in both institutional theory and population ecology is that organizations that are widely categorized as similar influence each other's viability especially closely (Meyer and Rowan, 1977; Carroll and Hannan, 2000). A common lament in these literatures is the lack of empirical attention to how consumers socially construct similarity judgments so that observation of an existing organization is generalized and legitimizes another newly founded organization (Zucker, 1987; Carroll and Hannan, 2000; Scott, 2001). We showed that shared organizational characteristics can explain how investors viewed insurance- and pension-providing firms as similar enough categories to let the loss of legitimacy by a member of one organizational form also affect the other. We also showed that shared characteristics of organizations can cause categorization across organizational forms. The findings on deviance-related characteristics were especially strong. Our findings thus support the contention that the distinctiveness of an organizational form matters for how easily it is legitimized (McKendrick et al., 2003; Dobrev, Ozdemir, and Teo, 2006) or, as we show, is delegitimized.

Our findings point to the need to enrich empirical investigations of legitimization processes. Studies can now move from examining density as an indicator of cognitive legitimacy to include normative evaluation of the actions undertaken by an organization. Legitimacy gain or loss is not only conveyed across organizations that are deemed similar in form and structure but also in what they do, as the Skandia scandal affected different organizational forms seen to do similar things (other financial firms with real-estate holdings). Thus the influence of organizational density can be moderated or enhanced by the valence of organizational actions. It follows that the demise of a non-controversial firm would influence the legitimacy of an organizational form differently than the demise of a scandal-ridden firm.

Our findings are also relevant to the sociology of markets. A growing body of work investigates the role of categorization by critics in the functioning of markets (Zuckerman, 1999, 2000, 2004; Lounsbury and Rao, 2003). Our work enriches this literature in two ways. First, whereas prior work has shown effects on mediated markets, i.e., the effect of categorization by expert stock market analysts, our findings highlight the effects of a distributed categorization across a mass of small investors that is mediated by daily news media. The categorization of organizations, even by non-experts and for a diffuse audience, is consequential for the functioning of markets. Second, while recent work has investigated the effects of ambiguous categorization on markets (Zuckerman, 2004; Zuckerman and Rao, 2004), we showed how unambiguous but crude categorization causes a contagious loss of legitimacy. Crude categorization can have global consequences, such as when the 1997 Asian financial crises spread to other emerging economies (Kaminsky, Lyons, and Schmukler, 2000).

This point is related to the issue of whether the stigmatization of deviant actors can have socially beneficial consequences. It is commonly argued that punishment is useful even against (sufficient) suspicion of guilt to establish cooperation among selfish economic agents (e.g., Green and Porter, 1984). It has been also argued that stigmatization is a mechanism for preventing wrongdoing by individuals and organizations and that the harm associated with stigmatization only occurs when it is applied through irrelevant criteria or spreads to unconnected actors (Paetzold, Dipboye, and Elsbach, 2008). Spreading blame for a deviant act through categorization, as we have documented, seems to tilt the balance in the direction of stigmatization being mainly harmful, and it is likely that the harm is greater when the contagion is widespread or the audience's reaction is strong.

Our findings have some parallels with the theory of attitude formation and classification. First, one explanation of individual attitude change is evaluative conditioning (Martin and Levey, 1987), which is a process of linking stimuli and adverse reactions that allows attitudes to spread through mere proximity (Walther, 2002; Pontikes, Negro, and Rao, 2008). Because the sales in these data were not a result of direct experience with adverse events, our findings suggest that evaluative conditioning spreads through proximity of organizational forms. Second, we assumed that the organizational classification step required for generalization or proximity judgments was a result of comparing organizational characteristics, as in the theory of organizational identities (Polós, Hannan, and Carroll, 2002; Dobrev, Ozdemir, and Teo, 2006). Likewise, the theory of classification proposes feature matching as central in categorization tasks (Tversky, 1977).

Future research should continue to investigate legitimacy loss. In contrast to ecological theories that have treated the transfer of a general form of legitimization, we showed that audiences generalize judgments following a deviant act by similarity of organizational form or by relevance of the act, and we found evidence of both forms of generalization. The data did not permit us to compare these two dimensions directly,

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as they had significant overlap. We are thus fairly confident that audience members use at least one of these dimensions to generalize, but identifying which one (or both) must wait for future research. Considering this in light of the call to consider legitimacy as a multidimensional construct (Ruef and Scott, 1998) raises the intriguing prospect of differentially conveyable legitimacy. Future research should also address legitimacy recovery, which is an important process both for practical reasons and for its potential to illustrate how long the audiences remember deviant actions. Legitimacy may recover as a result of sheer forgetfulness—individual or collective in the form of consumer turnover—and possibly the recovery is stronger for organizations further away (cognitively) from the event. Loss and recovery of legitimacy as a result of deviance by other organizations are important phenomena that we know little about, and they should be fruitful areas for research.

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