

IMPRESSION MANAGEMENT AND REPUTATION DEFENSE IN
19TH CENTURY CREDIT RATING

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**IMPRESSION MANAGEMENT AND REPUTATION DEFENSE IN
19TH CENTURY CREDIT RATING**

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I focus empirically on credit rating decisions by local offices within a prominent 19th Century credit rating agency, as the organization, as a whole, responded to external threats. Findings from this study show that the heightened accountability of reported performance feedback is an important factor shaping the nature of lower-level organizational response to evident failures in decision-making processes. Public failure, which engenders threat to the organization, heightens the need to justify decision-making processes at the local level. I provide evidence to suggest that, at times when this need was greatest, credit-rating agents in local offices responded avoiding changes to previous ratings decisions, and when changes were made, these choices reflected greater conformity (greater reliance on decision criteria and standards consistent with emerging commercial norms and conventions). Also, local offices made changes to the way they produced and distributed source material, changes that made these processes appear more conventional and information more accessible. Together, these legitimacy-driven responses led to poorer quality decisions and less functional information. The very different nature of credit reporting during this period points to systematic differences in organizational response to failure under different historical conditions. Moreover, it raises questions about the larger structure of decision-making in mediated markets, where critics and gatekeepers, like many other economic actors, are sensitive to public scrutiny and labor to shape their reputations.

BIOGRAPHICAL SKETCH

Kelly Patterson received his undergraduate degree in Business Administration from The Citadel in 1992. After graduation, he spent 6 years in the United States Marine Corps. He received his MBA from Ohio State in 2000, and received his Ph.D. in Sociology in 2013.

To my father, James W. Patterson

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INTRODUCTION

Research on markets and organizations reveals that the attempt to evade an audience and cloud its perceptions is not an uncommon phenomenon. There certainly has been no dearth of research exploring the ways and conditions under which organizations manipulate audience cognition by distorting information. On the edge of organizational theory, studies ranging from literature in marketing on persuasion and customer attraction (e.g., Gardner 1975) to more critical studies of fraud and deception (e.g., Baker and Faulkner 1993; Galbraith 2004) examine the active management of constituent attitudes and sensitivities through information content and access. More centrally, institutional theory studies of decoupling and symbolic management (Pfeffer 1981; Perrow 1985; Westphal and Zajac 1994, 2001), as well as impression management studies of spokesperson intervention and “sense-giving” maneuvers (Sutton and Callahan 1987, Elsbach et al. 1998), tie firms’ choices of structures, strategies, and tactics to the need to “mask or distract attention from controversial activities” (Elsbach and Sutton 1992:700; see also Meyer and Rowan 1977).

I examine information distortion as it relates to socially-constructed reputations in markets (Merton 1968; Rao 1994) – reputations that depend on performance as well as attention to building and maintenance, which builds on previous work that examines legitimacy and its relationship to performance and conformity behavior (Aldrich and Fiol 1994; Phillips and Zuckerman 2001). What sets this study apart, however, is its emphasis on the recognition of poor performance versus success. I claim that a firm will engage in conformity and legitimacy-seeking behavior to mask poor performance, softening its impact on a firm’s reputation – even when this legitimacy-seeking behavior erodes performance even further.

In this study, I examine mid-19th century credit reporting – a time when professionals at a major reporting agency were addressing the inevitability of poor performance. I provide evidence to show how these experts, concerned with averting scrutiny of an emerging reporting format, intentionally distorted published evaluations through shifts in evaluation criteria, manipulation of evaluation outcomes, and changes to the information collection and recording process. I submit that these distortions were designed to fend off criticism of newly (and reluctantly)-introduced credit ratings, minimizing reputational damage during periods when the visibility of these evaluations is particularly high.

In my setting, I observe that a credit reporting firm used distortion to avert controversy at two key moments: (a) at the time of the release of this new, inferior credit reporting format and (b) at the time of extreme public censure following the release. For this firm, building and maintaining its reputation during the earliest, formative years of the credit reporting industry required managing the reporting process to help distance itself from anticipated audience challenges (e.g., media scrutiny, litigation) that threatened to erode market share and legal protection.

CHAPTER 1

THEORETICAL OVERVIEW

Failure Response

Because this study examines poor performance and a firm's strategy for addressing it, it necessarily builds on theories of firm adaptation and learned response to failure. Seminal work on the behavioral theory of the firm emphasizes the organizational processes of performance evaluation, search, and decision-making, proposing that decision-makers evaluate their performance relative to aspiration levels, initiating a search for alternative decision-making routines when they do not expect to meet these performance targets (Cyert and March 1963). Although the study of performance feedback and adaptation has progressed immensely since the time of this foundational work, important issues remain unresolved and important questions remain unanswered. It is unclear, for example, why anticipation of failure to meet aspiration levels, alone, is often not enough to engender an effective solution to productivity shortfalls. Scholars have argued convincingly that using sociological perspectives of the limits to rational decision-making will provide a more complete understanding of the process of organizational adaptation. Vaughan's (1990) work on the Challenger disaster, for example, shows that internal culture and relationship structure can stand in the way of effective problem-solving, even when failure is imminent. Ross and Staw (1993), in their study of the Shoreham Nuclear Power Plant, describe the cultural norms and political pressures that can lead to pathological commitment to prior courses of action. This study helps add texture to extant research on failure response by drawing attention to the role of failure in influencing relationships within a firm and the way that failure is addressed by a firm's internal units.

Rigidity of Response

Organizational response to failure and poor performance has been a central topic of interest in organizational and decision-making theory, with much of the discussion centering on the tension between the motivation to change and the ability to break the cycle of ineffectual decision-making. Early behavioral theory first showed how organizations learn from their experience by repeating apparently successful technical routines and abandoning unsuccessful processes (Nelson and Winter 1982; March 1988). A decision-maker's growing preference for past behavior results from the repetitive use of these past choices (Levitt and March 1988). However, when repeated patterns lead organizations to discontinuous change (typically accompanied with performance loss), decision-makers engage in "problemistic" searches, effectively breaking the path-dependency of past choices (Nelson and Winter 1982).

This key point – external-internal incongruence induces corrective action – is the foundation for a long line of research on performance-based structural change (e.g., Lant et al. 1992; Greve 1998) and organizational learning (Levinthal and March 1993). If we apply this adaptation principle to expert evaluation, we might see public censure as pushing expert organizations to re-evaluate decision-making processes, yielding changes to evaluation choices.

Research does not, however, uniformly support the view that negative feedback prompts internal adjustments to routines. From a threat-rigidity perspective (Staw et al. 1981), core decision-makers become less likely to react effectively or change direction when threat perception – a deep sense of vulnerability, loss, and lack of control (Dutton and Jackson 1987) – accompanies negative feedback. In particular, when negative feedback is perceived as a legitimacy threat – role insecurity and intense external scrutiny (Fox and Staw 1979) – decision-making processes will tend

to become more rigid and inflexible (Staw et al. 1981), constraining the range of action and consequently, the quality of response.

Examples of organizations facing endogenous failure and exogenous shocks provide evidence that organizations are often prone to unresponsive behavior in light of their own shortcomings (Cameron et al. 1987; Sutton and D'Aunno 1989) and greater inertia in the face of environmental change (D'Aveni and MacMillan 1990). Both structural and psychological factors constrain choices by key decision-makers of the organization, it is argued, so that threat perception reduces experimentation in response (Ross and Staw 1993). Structurally-speaking, the flow of information and patterns of control restrict the dynamic ability to explore, refocus, and implement technical discovery. Top-level decision-makers share less and solicit less feedback to inform choices. At the individual level, anxiety and stress brought on by threat conditions limit top decision-makers' focus and attention, so that they may further disregard important information and narrow the range of dominant responses to the most structurally and cognitively routine (Staw et al. 1981). In sum, failure perceived as a serious threat leads key decision-makers to resist change, adopting only the most comfortable, easy-to-access solutions to performance shortfalls.

In this way, core decision-makers are often just running faster in the same direction in response to crises. As the saying goes in tennis instruction, they simply "run around the backhand." That is, they favor a more comfortable, dominant move, to the point of aggressively avoiding a more effective, well-rounded game. Counter-intuitively, motivation to change under conditions of threat perception constrains rather than enables a dynamic range of action (Prahalad and Bettis 1986; Ocasio 1998). Support for this idea can be found in research ranging from employee behavior during decline (Cameron, Sutton, and Whetton 1988) to organizational creativity during downsizing (Amabile and Conti 1999). We can conclude from this work that

organizational work environments characterized by sudden instability and negativity or even the mere anticipation of such a climate can dampen the dynamic nature and utility of the thought process. Loss of an organization's cognitive capacity bounds a firm's rationality (March and Simon 1958), though decision-makers are prompted to improve it.

Politically -Motivated Decision-Making

Though the rigidity of organizational decision-making clearly affects the nature and quality of choices, it does not necessarily follow that decision-making is suboptimal because of the attachment to the routine and familiar. Decision-making might also be suboptimal because the motivation to impress trumps the motivation to improve. The rigidity perspective argues that change is limited to a narrow set of dominant responses, but what are these dominant responses? Must they be internal routines learned through experience? Ocasio (1998) argues that this does not have to be the case. As institutional theorists have long noted, actors can vicariously learn or mimic decision-making rules and conventions used by other organizations, employing these conventions to gain legitimacy (see DiMaggio and Powell 1983). To examine this phenomenon more closely, I discuss various decision-making models that may apply, closing by suggesting that accountability pressure accompanying public failure provides a context where this kind of political action is especially likely.

There are different ways researchers in the social sciences model decision making, many of which can be grouped according to the relative importance researchers place on the model of human thought, the limits of their capabilities, and the locus of decision-making goals more broadly.

Many researchers emphasize the way that judgment and choice function to appraise reality and maximize utility. This rational actor approach assumes that actors

are inherently self-interested, seek clarity, and take the most direct, efficient action to pursue their goals (Williamson 1979; Elster 1996). Actors are imagined as instinctive scientists, seeking to effectively process information to make sense of the world and use what they gather to rigorously appraise a variety of social situations (Fiske and Taylor 1991). When confronted with a set of circumstances, they resourcefully process information, make well-informed inferences, and use these conclusions to make sound predictions about possible future outcomes. Actors are also thought of as amateur economists, navigating their situations by assessing these outcomes in light of instrumental goals and then choosing a course of action that most efficiently and effectively advances their individual interests (Kagel and Roth 1995). In short, a purposeful and analytic actor is driven to make a rational choice – to deliberately choose from among alternatives based on expected consequences. This functional model of decision making is appealing, as it is powerfully predictive and elegant in its simplicity. Researchers only need to assume a set of preferences and expected outcomes to model large-scale behavior based on marginal returns on competing investments. Critics have cautioned that the scope of this model is limited; core assumptions fall flat when attempting to model individual judgment and choice where decision making ability is limited.

An alternate model attempts to address a lack of realism in the model. The bounded-rationality model views decision making in a more cognitively plausible way, assuming that individuals have neither the time nor the resources to pursue all of the information that they need to make perfectly rational decisions (March and Simon 1958). Decision-makers attempt to effectively appraise current reality and maximize future utility, but their ability to reason is handicapped when they confront these limitations. The bounded rationality model allows departures from rationality. Under conditions of environmental uncertainty and complexity, people often resort to

“satisficing” or looking for a course of action that is simply satisfactory, for example. They also activate cognitive biases – subjective opinions operating below the level of consciousness that reduce the complexity of decision-making (Kahneman et al. 1982). These departures, while not purely rational, are functional in their own right. However flawed, a person’s eventual judgment and choices derive from these shortcuts that serve to make decision-making more efficient (Tversky and Kahneman 1974). As Elster (1996) suggests, “When faced with several courses of action, people usually do what they believe is likely to have the best overall outcome” (p. 22). The eventual outcome, however, is often one that neither makes the most sense of the situation nor maximizes utility. By positing people as intendedly rational – that is, people are forward looking, but limited in their ability to process information in order to effectively predict outcomes – this approach preserves the idea that awareness and reason underlies decision-making, while more credibly modeling judgment and choice.

The rational actor and bounded rationality models cast decision making as a fundamentally forward-looking process. Actors seek the best cognitive representation of the situation and attempt to use this newfound cognitive mastery (or best possible appraisal) to effectively predict and choose among future outcomes. March and Olsen (1989) suggest that these functional models might not capture the way that many decision makers actually make up their minds. These accounts fail to consider personal history and past experience, which bear heavily on the choices actors make. As Ronald Coase (1998) suggests, these accounts can be likened to the study of "the circulation of the blood without a body" (p. 73). A second class of models is grounded in convention and assumes that decision makers make choices based on pre-determined scripts or norms. These adaptive actors are essentially backward looking, looking into the mirror of the past rather than into the shadow of the future.

The first of these models, the experiential learning model, assumes that people are aware of their cognitive limits and choose actions close to past actions to reduce the risk of poor execution. Decision making evolves in a relatively unpredictable manner as actors avoid and correct mistakes by making a sequence of incremental changes rather than evaluating all alternatives and selecting one. For decades, actors and the groups they belong to have been characterized through history-dependent models as being incrementally adaptive to past experience (March and Simon 1958, Cyert and March 1963). Even with clear goals in mind, however, learning from one's own experience is notoriously difficult (Levitt and March 1988, Levinthal and March 1993). An individual may be unable to effectively reach goals due to a lack of personal experience, or because of an abundance of experience, but is influenced by the inertia of that experience to make suboptimal decisions. A phenomenon known as the learning curve, for example, shows that as actors gain experience executing a certain task, their execution cost or time decreases, though at a decreasing rate. They eventually reach a point of diminishing returns where repetition ceases to provide marginal returns. At the same time, it burdens them with the weight of switching costs.

Related to the experiential learning model is the vicarious learning model. This approach assumes that, when effective procedures fail to arise from an actor's own experience, he mirrors the behavior of others (March 1991). Vicarious learning comes from observing and consulting with other individuals and groups in a social system. Weber's (1922) theory of bureaucracy contains traces of this approach, with its emphasis on the role of routines in formal organizations in reducing uncertainty and providing guidance to individuals confronted by recurring demands. Simon (1997) similarly describes the purpose of the formal collective, which places "the organization members in a psychological environment that will adapt their decisions to

the organization objectives, and will provide them with the information needed to make these decisions correctly” (p. 92). As with experiential learning, however, when actors decide to do what was done in the past, they choose a course of action that may or may not have the highest payoff. When people decide on courses of action that have worked for others in the past, they reduce the cognitive demands of decision making, yet increase the risk of not maximizing utility by failing to sufficiently reason through future consequences of alternatives. In this case, the value of others’ experience depends on comparability. Influence is more effective when others’ circumstances are more similar (March 1991).

Another alternative to forward-looking models – a rule-based model – suggests that conventional behavior might come from conviction, rather than repetition. This model assumes that actors operate within the boundaries of principles and values. Departures from rational behavior are due to a shift in logic from quantitative utility calculation to a more qualitatively focused assessment of appropriateness grounded in moral conviction. Through group affiliation (Tajfel and Turner 1986) and exposure to wider cultural institutions (Friedland and Alford 1991), people develop a set of beliefs about themselves and orientations toward action and evaluation. These orientations lead to ritualistic behaviors that supplant more forward-looking instrumental behavior (DiMaggio 1997). As with learning models, this rule-based model relaxes the informational and deliberative capability needs of forward-looking rational actor models, making it a more cognitively plausible representation of actual decision making in various social contexts. One key feature of this model is that it is most useful in contexts where identity and logics are most salient. Swidler (1986) argues, for example, that ideologies and cultural codes are most influential as guides under conditions of uncertainty. Another key feature of this model is that its predictive power is closely tied to the trajectory of the conventions that drive behavior. As Macy

and Flache (1995) suggest, the analytic focus of such a model shifts “from the calculus of marginal utility ... towards the evolution of hard-wired cultural codes, including pragmatic or heuristic routines, social conventions, institutionalized rituals, moral habits, and normative rules.” Failure to track the changing basis of values and beliefs limits the usefulness of this rule-based model.

While the aforementioned models vary in terms of their assumptions about the nature of human thought and the capability of human cognition, they all depict decision making as an instrumental process serving immediate goals. A final approach depicts decision makers as political actors, seeking to gain legitimacy and maintain good relations with others, often sacrificing goals that fit their own personal agenda. This political decision making model views the adoption of practices as either a gesture of solidarity (Meyer and Rowan 1977) or as a way to pursue a course of action that is most readily justifiable (Tetlock 1992). In many complex, socially embedded contexts (Granovetter 1985), the public expects that actors will assume broader societal roles or operate within the boundaries of predetermined norms, even when actors do not embrace these norms as part of their personal belief system (DiMaggio and Powell 1983; Scott 1987). Here, instinctive scientists and amateur economists adopt a practice to appear in conformance with norms, rather than pursue their own self-interest in a more immediate, straightforward way (DiMaggio and Powell 1983, Zucker 1987).

Impression-Motivated Response

This political decision-making model informs a large body of research attending to the relationship between firm performance and the firm’s attempt to gain social recognition for the quality of its goods and services. Research shows, for example, that actors can enhance their own image through strong endorsements and

public recognition by highly-regarded others, such as the press, credentialing organizations, trade associations, and regulatory institutions (Ruef and Scott 1998; Jensen and Roy 2008). Well-publicized boosts in credibility act as a form of validation (Rao 1994), even in cases where they do not necessarily provide new information about the firm (Rindova et al. 2005; Anderson and Shirako 2008). As news of public endorsement circulates, a firm's legitimacy grows, strengthening the generalized belief of a firm's quality (Barney 1991; Hall 1992; Deephouse and Suchman 2008), making stakeholders feel more secure in building relationships, and helping customers feel more comfortable paying a premium for services rendered (Merton 1968; Bromley 1993; Fombrun 1996). When the spotlight is turned on poor performance, it has the similar effect of sharpening the impact of such performance on reputation. If it persists, such attention will likely overshadow past success and its impact on performance, eroding any residual perceptions of quality (King and Pearce 2010).

Response Behavior

Being singled out for poor performance can be an effective mechanism for triggering a problemistic search – a search for strategies to restore an audience's comfort and confidence. As Zajac and Westphal (1994) suggest, negative signals of quality from external audiences can grab a scrutinized firm's attention, prompting immediate corrective action. While motivated to take action, a high-visibility, low-performing firm quickly faces factors that limit the range of corrective action. For one thing, it lacks the time to improve its reputation with sustained, improved performance. Without the opportunity to provide admissible evidence of reliability and competence, the firm bears the immediate burden of providing others clues to guide expectations. With an elevated sense of urgency to “fill the void” with this

evidence, the short time that it has to mend fences is typically not spent properly searching for a performance improvement solution to effectively assuage its critics (Staw et al. 1981; Suchman 1995).

Rather, the immediate focus typically shifts from improving technical processes to managing the perception that the firm itself is sound (Perrow 1984; Ashforth and Gibbs 1990). For most decision-makers, the attention that public failure draws engenders the felt need to justify behavior to others, and this accountability pressure shifts the firm's focus from the effectiveness of choice processes and routines to its social acceptability (Lerner and Tetlock 1999). This political motive determines the choice of corrective action for the firm, which often includes matching the specific, known preferences its audience (Tetlock 1983). Even if audience preferences are unknown, the firm might choose a course of action that is more in line with the cultural norms and conventions persisting in the wider public (Meyer and Rowan 1978; Swidler 1986). Such symbolic gestures serve to defend legitimacy expeditiously, even when such action has no real impact on performance (Boeker 1992; Phillips and Zuckerman 2001; Uzzi and Lancaster 2004). In effect, this behavior creates an immediate "firewall" of sorts between past censure and ongoing capability-building (Suchman 1995).

A caveat here is that the high-visibility, low-performing firm might have more success with some gestures than with others. Any strong, self-promotion tactic following negative publicity may be hazardous, for it would probably be viewed as forced, superficial, or manipulative (Ashforth and Gibbs 1990). Rather than actively broadcasting a counter-message from a tainted source, a censured organization would be more likely to influence public opinion by minimizing the extant negative message. Suchman (1995) calls this attempt to lower a firm's visibility a "normalizing" strategy,

which is, in a sense, fighting fire with fire; a firm can take steps to minimize its signature, thereby dampening the effect of failure on its reputation.

Anticipatory Strategies

Firms that anticipate failure, rather than those facing past transgressions, are at a distinct advantage here. If a firm expects to deal with scrutiny, it can pursue a normalizing strategy that preemptively controls news before it reaches the public (Elsbach et al. 1998). That is, it can try to prevent the social construction of an unfavorable reputation – fighting fire with fire before the opposing flame is lit, so to speak. Even in cases where the likelihood of a scrutiny-inducing event is uncertain, awareness of the possibility of failure is shown to have made firms more likely to try to manage their audience’s attention in a way that reduces the likelihood of any strong impression being made (Suchman 1995; Elsbach et al. 1998; Graffin et al. 2009; Desai 2011). For example, Elsbach et al. (1998) show how hospitals avert audience challenges to hospital bills by redirecting their attention or overwhelming them with positive or negative images orthogonal to the charges themselves. Graffin, Carpenter, and Boivi (2011) argue that to minimize direct scrutiny of an event, firms can coordinate a “noisy” release of information about the event (p. 749). Here, the firm floods the public with multiple, simultaneous pieces of relevant information, so that any first, anchoring impressions are difficult to make. In these ways, organizations expecting criticism avoid drawing attention to future, potentially disruptive events by distracting and overwhelming audience attention (Elsbach et al. 1998).

Rather than flooding potential critics with relevant information, reducing an audience’s ability to process these cues, they might also take a more minimalist approach. That is, rather than overloading processing, they might avoid stimulating this processing in the first place.

Ratings Distortion

External Assessment Criteria

The earliest work in institutional theory suggests that firms can reduce their signature, masking or distracting attention from controversial core routines, without aggressive self-promotion by adopting structures that conform to institutional norms and then decoupling these structures from unacceptable processes. Research provides some proof that illegitimate, atypical firms attract attention to themselves in a bad way (Elsbach and Sutton 1992; Hsu and Hannan 2005). It follows, then that, rather than adopting legitimate practices and structures to amplify their successes (Rao 1994), they might do so to avoid attention, averting a socially constructed, negative reputation.

Like the aforementioned impression management techniques, this approach involves activities that can be thought of as collateral or window-dressing activities – peripheral to core, day-to-day routines. However, firms can also carry out controversial core activities without unwanted attention by using legitimate, socially-endorsed procedures to execute these activities (Meyer and Rowan 1977; Scott 1987). Citing econometric procedures as an example, Meyer and Rowan (1977) propose that having conventional practices in place ahead of poor performance helps to justify the decisions made that lead to failure, thereby avoiding controversy.

As previously mentioned, lines of research in institutional theory and impression management explore themes consistent with extant research in social psychology on accountability. The accountability perspective depicts decision makers as political actors, seeking to maintain good relations with others and pursuing courses of action that are most readily justifiable when subject to heightened levels of scrutiny (Lerner and Tetlock 1999). When actors know the preferences of their audience, they are more likely to shift their own decision-making to align themselves with this

audience. For example, if decision-makers know their superior is a Democrat, they will likely select “Democrat” when asked to state their political affiliation (Tetlock 1983). Even when these specific preferences are not known, the actor may favor a commonly-known convention or appeal to a universal logic. Just as early research in institutional theory proposes, the actor may adopt external assessment criteria to demonstrate to a wider audience “that procedures were prudent and decisions were made by rational means” (Meyer and Rowan 1977:350).

When controversial decisions are part of a firm’s ongoing routines, these adopted criteria should be a rather persistent part of a firm’s decision-making processes. However, firms should be especially motivated to adopt such a tactic should there be a time when it anticipates heightened accountability. It is reasonable to expect that credit-reporting professionals engage in anticipatory tactics such as this one as a way to protect themselves from negative reactions to ongoing ratings assignments, especially when they anticipate greater attention drawn to their ratings. I should note that this tactic should also be desirable when decision-makers make choices under the heightened scrutiny of conflicting constituencies. Appealing to a universal logic is less controversial than adopting a specific preference when that preference is not shared among all stakeholders.

Stability

Accountability research suggests that when decision-makers make choices under the heightened scrutiny of conflicting constituencies, they are also likely to engage in evasive, decision-avoidance strategies. Simply passing the buck or procrastinating helps the actor avoid entirely the “stress of alienating one of the two (or more) disagreeing constituencies,” which in turn causes friction and attracts unwanted attention from critical audiences (Green et al. 2000).

Legal scholars in the U.S. find that judges are often motivated by these kinds of accountability concerns when making choices, even when these choices clash with their personal ideological loyalties or the perceived “correctness” of a decision (see Posner 2008 for review). They argue that judicial decision-making is effectively explained by a combination of various models, to include a strategic framework that highlights judges’ concerns with the reaction of other actors outside the judicial system to their rulings (Eskridge 1993; Robbennolt et al. 2008). Supreme Court justices, for example, are constrained by “an awareness, conscious or unconscious, that they cannot go ‘too far’ without inviting reprisals by the other branches of government spurred on by an indignant public” (Posner 2008:375). Decisions are often stalled or postponed to prevent subsequent legislative reversal (Eskridge 1993), and the Court is likely to avoid politically difficult decisions by denying “petition for writ certiorari” – a formal request to review a lower court’s ruling (Epstein and Knight 1998). Concerned with opening the “floodgates of litigation” (Margolis 2001) – a flurry of responses, likely to erode political capital and overwhelm the efficient use of judicial time and resources – judges tend to avoid the most controversial, attention-grabbing rulings. And despite conventional wisdom that judges use their posts to push their personal agendas, legal scholars maintain that most high-level judges are inclined to keep a low profile, embracing mainstream points of view and embracing *stare decisis* to the point where even a demonstration of error is often not enough to justify overruling past decisions (e.g., Monaghan 1988; Fried 1994; Hellman 1995).

In the context of credit-rating assignment, agents are similarly concerned with avoiding attention in the face of scrutiny. Changes to appraisal scores are the most likely way to attract attention among credit-rating stakeholders. In the same way that judicial overruling disrupts public policy and invites protestation (Posner 1996), ratings volatility prompts contract renegotiation and pricing adjustment while

redirecting attention to previously taken-for-granted risk assessments due to the alienation of key audience members, which, of course, makes the ratings professionals themselves more visible actors in the web of credit and investment activity. It is expected, then, that these experts will maintain consistency by minimizing or delaying period-to-period changes to their ratings following negative publicity – a time when accountability pressure is especially strong. That is, they will rely more heavily on past appraisals in the assignment of ratings to preemptively avoid a growing silhouette and subsequent escalation of scrutiny.

CHAPTER 2

19TH CENTURY CREDIT RATING

Preliminary Investigation

My interest in anticipatory tactics taken by Dun was sparked by historical accounts I came across, which described public complaints from both its customers (“subscribers”) and its evaluated firms. Taking issue with Dun’s reports, these complaints suggested that information was often inaccurate or prejudiced (e.g., Meagher, 1876). There was certainly no dearth of praise for Dun during the 19th Century, as the agency provided a vital function for many (Hunt, 1851). In fact, during the formative years of the credit reporting industry, Dun grew in scope and standing to become the premier credit reporting agency of the 19th century. The strength of the agency’s reputation was tested, nonetheless. The least hostile of critics found that information produced by Dun was, at times, blurry and ambiguous. The most severe believed that information was outdated, misleading, and often slanderous. Litigation and criticism against Dun (and all credit agencies) appeared in the antebellum period and then surged through the 1870s (Oligario 2006). This created a climate of natural suspicion, where any release of credit information was potentially a negative event, compelling Dun to be on the defensive.

Preliminary reading revealed that Dun was particularly concerned with the critical attention its summary ratings generated. Growing competition among incumbent and upstart agencies, together with emerging market demand, forced Dun to reluctantly introduce this format, after it had spent decades building internal infrastructure and processes around written ledger reports. Aware that the demands required to produce high quality summary ratings exceeded its capacity, it was sure that expansion into this area would invite a great deal of the aforementioned criticism

(Lauer 2008; Cohen 2012). Consequently, it set out to influence the public's perception and shape its image in order to avoid scrutiny. Proactive impression management tactics included informational and public relations campaigns to offset critiques and exposés about rating (Cohen 2012). For example, it published testimonial letters in its defense – selected articles and letters from subscribers that both vouched for the accuracy of ratings and praised the firm, more generally, for its contributions to commercial development (e.g., Dun, Barlow and Co., 1873, as cited in Cohen 2012:532). As Cohen (2012) highlights, Dun was even willing to concede ground as an expert in order to avert scrutiny. In the preface of the ratings books, it issued disclaimers, which rejected responsibility for the way the information contained in the books was used. This “buyer beware” stamp suggested that the firm was willing to sacrifice the functional value of its product in exchange for the safety it needed during this period of heightened scrutiny.

If Dun was willing to undercut the utility of the ratings format to protect its reputation, then it may have purposely distorted ratings themselves to do the same. The aforementioned tactics used to form positive images of credibility and fairness were carried out through direct communication with stakeholders, given the efficacy of more subtle, anticipatory tactics.

These preliminary developments encouraged me to further explore the introduction of ratings in the mid-19th century credit rating industry as a context for developing a better understanding of how a firm responds to failure when its reputation is at stake. I propose that Dun used expert information and decision-making to attempt to cloud and evade an audience, preventing the social construction of a negative reputation.

Research Setting

The emergence of credit-rating agencies in the 19th century represents one of the earliest attempts to solve a growing information asymmetry problem in the market for commercial credit. With the improvement of transportation and communications technology during this period, the ability to conduct trade beyond local networks grew. Local exchange partners could get by with easily-gathered local information and informal credit assessments. However, as chains of commercial credit expanded, business owners needed credit reporting intermediaries with agents in the field to inspect and appraise distant merchants (Norris 1978). Located in offices all across the country, these credit-rating agencies supplied much-needed summary surveillance information to eager merchants for purposes of trade finance and investment. That is, these agents provided information to merchants concerned with the likelihood that a trading partner will default (fail to meet a debt obligation). These experts played an especially important role in emerging U.S. geographic markets. Powerful merchants in Northeastern cities were rapidly expanding their trade networks in the Western United States and in the South. Here, information asymmetry was especially acute, due to geographic distance, cultural differences, and scarcity of personal ties (Carruthers and Cohen 2006; Oligario 2006).

The Mercantile Agency was one of the early credit reporting pioneers. Founded by Lewis Tappan in 1841 and then later managed by Robert Graham Dun in the mid-1850's, the RG Dun Mercantile Agency (Dun) sent out its cadre of local agents to provide appraisals of the creditworthiness of would-be borrowers. Through direct experience, word of mouth, and letters of recommendation, all methods used previously by merchants in local transactions, this vast network of reporters allowed trading partners to assess large numbers of entrepreneurs in distant markets. As noted by the agency some time later, "the local agent . . . having his eye upon every trader of

importance in his county, and noting it down as it occurs, every circumstance affecting his credit, favorably or unfavorably, becomes better acquainted with his actual condition than any stranger can be” (Norris 1978).

Ledger Reports

Reports from Dun correspondents were transcribed into large collections of ledgers at local branch offices, copies of which made it into the central volumes in the main New York office. Ledger entries contained the proprietor’s name, line of business, and street address at the beginning. Shorthand and abbreviated language were used to conserve space, and all text was written in a 19th-century calligraphy style. Information on each business was contained in a single entry – a continuously-running paragraph with updates. Each update was preceded by the date of the update and a code number or initials (to ensure anonymity) designating the source of the report. Within the entries, key pieces of information were contained, such as assets, tenure, past experience, and character, all of which painted a picture of the commercial standing or local reputation of the business and its owners. This information was not always balanced. Findings about a person’s experience or past history of success or failure may not have been fully available, in which case additional information about an individual’s work habits or payment history may have been listed to compensate.

Copies of ledger entry updates in the local branch offices were sent to New York by mail, except in cases of “serious embarrassments, assignments, and failures”, news of which was immediately telegraphed (Banker’s Magazine and Statistical Register 1858). Subscribers – largely importers, manufacturers, and other firms shipping product to local retailers – were encouraged to visit the main office or their closest Dun branch office (a Boston business could visit the Boston office, which would then send a request to the main New York office for information on a business

in New Orleans) where they were read details from these updates and had the opportunity to discuss the firm and its history, more generally, with a Dun professional.¹ Code numbers for subscribers or (when subscribers were outside of the New York area) for their branch offices were recorded in the ledgers as inquiries arrived.

Credit reporting firms such as Dun's Mercantile Agency were in a unique position to solve problems of information asymmetry caused by nationwide shifts in the nature of trade. The credit reporting process was not safe from criticism, however. Narratives found in the ledgers commonly left risk assessments open to a wide variety of interpretations. Assessments were blurry and ambiguous at times, especially in cases where information was hard to come by, and in its worst light, the Agency was accused as having reports marred by prejudice. The vast majority of this criticism came from firms that were being evaluated.² Inaccuracies and biases, in the form of errors and omissions, could permanently handicap a firm, once on paper. To be fair, entrepreneurial activity in the 19th Century was fraught with uncertainty and risk, and even firms with the greatest potential ended up failing and defaulting on credit arrangements. Local knowledge was difficult to convey under these circumstances, and crafting the most careful, deliberate, and unbiased report must have been a challenge. Given several of the high-profile correspondents who worked for the Agency at one time or another (e.g., future presidents Arthur, Cleveland, McKinley, and Lincoln), one could imagine that every effort was made to craft such a report

¹ While the nature of this interaction left the subscriber without a tactile record to share with the community, information from these meetings routinely leaked to the public. While there was no legal protection of this information until the 1870's, making Dun's ledger information proprietary, it was Dun's (loosely regarded) policy to keep this information confidential. Still, a vast number of libel cases were brought to court by evaluated firms exposed to leaked information about them.

² See Scott Sandage's *Born Losers: A History of Failure in America* (Cambridge, MA, 2005) for an excellent account of the legal fight between rated firms and The Mercantile Agency.

(Vose 1916). Even so, this kind of objectification of commercial reputation and its formalization in the written ledgers was rejected by many during the mid-19th century as a matter of principle and, more practically, as a property breach (Atherton 1946; Sandage 2005; Oligario 2006).³

Under the shadow of this ante-bellum debate, Dun prospered. By the late 1850s, Dun had enjoyed a 15-year period of rapid growth and had become the most prominent agency of its time. Branch offices were located in over a dozen cities in the U.S., Canada, and the U.K., with subscribers in the New York office alone numbering close to 1,200. Despite normative resistance to credit reporting by evaluated firms and the ongoing legal fight over the proprietary nature of ledger information, credit reporting had gained wide acceptance within the community of merchants that was growing, itself, in need of the assessments provided by Dun and its competitors (Norris 1978), as well as an effective monitor to restrict risky businesses from credit arrangements.

Yet, post-bellum success brought with it a new set of problems. Drawing on theories of industry evolution and stages in competition and legitimacy-building (Aldrich and Fiol 1994; Barnett and Hansen 1996; Barnett and Sorensen 2002), I describe how Dun's competitive situation was changed during this period and how this change related to the emergence of summary ratings and accompanying reputational challenges.

Introduction of Ratings

Research in organizational theory recognizes that an upstart organization in an emerging industry is vulnerable to a particular kind of “newness” liability (Aldrich and Fiol 1994). On top of technical handicaps, such as poor internal coordination and

³ See Viviana Zelizer's *Morals and the Markets: The Development of Life Insurance in the United States* (New York, 1979) for a similar public and legal debate over 19th century financial objectification.

inexperience (Stinchcombe 1965), it suffers from an initial lack of legitimacy. That is, the new organization must convince suppliers, consumers, and other important stakeholders that its products or services – its industry-specific function in the market – is valued and appropriate (Suchman 1995). In an industry that is growing and gaining exposure, the firm's role is more familiar to the public and its function is woven more tightly into the fabric of the market (Hannan and Freeman 1986). More established industries are also more commonly endorsed and publicly recognized by others, such as the press, credentialing organizations, trade associations, and regulatory institutions. This provides entrants a level of normative credibility and validation that new industries cannot offer (Ruef and Scott 1998; Jensen and Roy 2008).

While new firms benefit from an industry's maturation, incumbent firms those that have successfully promoted new industry development – risk facing a set of legitimacy problems distinct from the liability of newness. Such was the case for Dun during the post-bellum period. During these years, the credit reporting industry transitioned from early-stage to adolescence. Though vocal stakeholders still contested the quality of credit reports, the industry gained a foothold, roles became established, subscribers and appraised firms began to trust and understand the agencies, and reporting processes – the chief interaction between incumbents such as Dun and these stakeholders – began to become taken-for-granted and more easily reproduced by newcomers (Norris 1978, Oligario 2006).

The cost to enter the credit reporting industry thus dropped, leading to heightened competition and crowding therein (Hannan and Freeman 1986). Simply put, as agencies improved their collective social standing among constituents, incumbents, such as Dun, risked losing their individual competitive positions to newcomers. Consistent with the Red Queen theory (Barnett and Hansen 1996; Barnett

and Sorensen 2002), this triggered an arms race of sorts, where Dun felt pressure to adopt a new, potentially disruptive technology to compete with these entrants⁴.

Though Dun had survived a history of early-stage competition, it was not well-adapted to such change, constrained by the inertia of its existing processes and the growing cost of controlling and distributing information across its expansive network of branch offices (Lauer 2008; Cohen 2012).

With the cost of expansion beyond a firm's core processes comes a growing need to deal with reputational fallout associated with poor performance (Greenwood, Li, and Deephouse 2005). When a firm's capability is compromised, it has the added burden of defending its reputation, limiting its exposure, not heightening it, as in its formative years (Sutton and Galunic 1996; Suchman 1995). Before examining how Dun tried to protect its reputation at this time, I discuss the aforementioned disruptive technology – summary ratings.

Ratings

In 1857, J.M. Bradstreet and Son was the first credit-reporting industry incumbent to expand beyond its primary, ledger-based reporting format, issuing summary ratings in book form. By this time, credit-reporting agencies had been around for a little over 20 years.⁵ Subscribers had limited exposure to ratings before this time, but it wasn't until the years just prior to and just following the Civil War that

⁴ This type of self-accelerating process, where perpetual adaptation is needed in order for a firm to maintain its relative fitness among competitors, was first identified in evolutionary biology by Van Valen (1973). It references the Red Queen's race in Lewis Carroll's *Through the Looking-Glass*, where the Red Queen and Alice are constantly running, yet remaining in the same place. "Well, in our country," said Alice, still panting a little, "you'd generally get to somewhere else — if you run very fast for a long time, as we've been doing." ... "A slow sort of country!" said the Queen. "Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

⁵ Griffen, Cleaveland, and Campbell started in 1835, followed by Dun (then called the Mercantile Agency) in 1841 and Bradstreet between 1849 and 1850.

ratings books were fully introduced. As Cohen (2012) describes, the introduction of summary ratings was accompanied by a large, industry-wide advertising and public relations campaign to promote this new format. This increased the public's exposure to ratings⁶ and their accompanying ledger material, warts and all. It follows that concerns with self-presentation were heightened due to the increased public exposure to the performance shortfalls associated with these formats.

Subscribers were at first intrigued with the ratings books containing summary ratings – advertised as rationalized summaries of the ledgers. As the preface to Dun's inaugural Reference Book of ratings states, ratings were “based upon the historical facts upon our records, often running back eighteen years, regarding the business training, the moral and business fitness, the capital, the nature, extent, and hazards of business...” (Mercantile Agency 1859).⁷ In an effort to provide a low-cost, credible set of records to the public, Dun categorically ranked both the capital of firms⁸ and their credit standing (weighted in favor of capital) in two summary measures assigned to each enterprise. Credit appraisal information in this format was easily more accessible to subscribers, who otherwise incurred significant time and travel costs to visit branch offices where ledgers were presented. The process of simplifying appraisal information and making the often vague, verbose, and subjective language of the ledgers more quantifiable also gave credit reporting a more rational and objective appearance – the sense that evaluators had a clear standard when assigning scores.⁹ Some subscribers also benefitted from having lists of rated firms at their fingertips.

⁶ As Cohen (2012) points out, ratings became a key component in the public face of the agency.

⁷ Two more reference books (1860-61) were published before the Civil War. Ratings resumed in 1864.

⁸ The inclusion of assets level or pecuniary strength” categories was a first in the industry, introduced in the 1864 book.

⁹ As the locus of credit authority shift from credit ledgers to credit scores, even the credit ledgers themselves (which remained in the background as justification for the credit scores) qualitatively changed to meet these demands, taking on a more structured, mechanical tone..

For example, large merchants and manufacturers could get a more complete view of the firms in a particular industry or in a specific geographic location. Aside from having this kind of access to information about others, subscribers benefitted from having easy access to their own ratings, getting a sense for the way evaluators perceived them. Also, as Cohen (2012) points out, interfacing with a Reference Book rather than an office professional gave the subscribers some degree of anonymity (p. 405). They could check ratings without revealing to the agency anything about their own trading activity, current or intended exchange partners, etc.

Despite having benefits that made them attractive to subscribers, this ratings format introduced a number of problems that affected the reporting process. For one thing, when information is compressed to form ratings, the appraisal of credit risk is stripped of its detail and context. Relying on ratings, subscribers were potentially trading clarity for ease of access. Additionally, as Cohen (2012) describes, numerous organizational and environmental processes behind the scenes likely affected the degree to which a score reflected the underlying fitness of a firm. Examples included the state of internal communication, variation in the level of oversight exercised, and a shifting emphasis on the kinds of information favored in the assignment process.

Not only were there limits to the utility of summary ratings, there were limits to how much Dun could control this information. Once ratings were placed in subscribers hands (ledger reports were left at the branch offices), subscribers could share information with be shared with others, taking away a significant revenue opportunity. Similarly, there was a risk of ratings being copied by other agencies, especially upstart agencies with no reporter network of their own.¹⁰ The cost to control this kind of information was reflected in the felt need to monitor subscribers, but it was also reflected in the rising cost of litigation. The more ratings information

¹⁰ See Cohen (2012: 406) for instances of interagency ratings theft.

spread, the more likely it reached an evaluated firm that disagreed with the scores. Similarly, the cost of keeping the information up to date rose. When subscribers requested ledger information, Dun professionals could delay them long enough to give a reporter time to submit an update (Cohen 2012).¹¹ Without that level of control over the distribution and collection of ratings information, however, branch offices had to proactively inspect a vast number of firms to stay current. Failing this led to a greater risk of out of date information spreading, leaving Dun open to criticism and litigation.

Inasmuch as ratings were more useful to subscribers, Dun increased its revenue potential. Unfortunately for the agency, much of this additional revenue was used to subsidize the growing cost of providing ledger entries on an increasing number of firms. Otherwise it was amortized across a growing number of libel cases that resulted from the ratings flaws. The years following the introduction of the ratings format, there was certainly a greater need to manage the perceptions of both subscribers and evaluated firms. Dun had hoped to maintain its reputation among its subscribers as an information expert by tending to the functionality of ratings, thus keeping revenue potential high. Equally important was the desire to avoid lawsuits, which eroded both its reputation and financial position. As research by Cohen (2012) revealed, however, Dun knew that the accuracy of ratings was difficult to ensure. Since functionality could not be taken for granted, Dun had to look for ways to shape the perceptions of both subscribers and evaluated firms in a way that reduced criticism.

Behavioral Response to Accountability Pressure

In the context of credit-rating assignment, Dun professionals were concerned with avoiding attention in the face of scrutiny. Changes to appraisal scores were the most likely way to attract attention among credit-rating stakeholders. In the same way

¹¹ Sharing information during an office visit was often reciprocal, which meant that the ledger-based reporting process was less costly in terms of both information distribution and collection.

that judicial overruling disrupts public policy and invites protestation (Posner 1996), ratings volatility prompted contract renegotiation and pricing adjustment, while redirecting attention to previously taken-for-granted risk assessments due to the alienation of key audience members. This, of course, made the ratings professionals themselves more salient actors in the web of credit and investment activity. It is expected, then, that these experts maintained consistency by minimizing or delaying period-to-period changes to their ratings following negative publicity – a time when accountability pressure was especially strong. That is, they relied more heavily on past appraisals in the assignment of ratings, to preemptively avoid increasing salience and subsequent escalation of scrutiny.

Additionally, I expect there was a change in the weight that Dun professionals placed on certain ratings criteria. While experts typically rely on detailed, objective financial and operating data to help reveal underlying quality or risk potential of others (Reilly and Brown 2011), the extent to which evaluators use this performance data to make evaluative changes varies across industries and contexts. It is not uncommon for evaluators to supplement this information with indirect, secondary information, particularly when the evaluative task is demanding and primary data is limited (Sanders and Boivie 2004; Spence 1974). Decision-makers often look for secondary clues to help determine underlying quality, and screen their choices based on the presence of attributes they assume are correlated with desirable behavior (Weiss 1995).

Characteristics of the firm are often used as such secondary indicators of quality (Podolny 1993). When determining the fitness of a firm, the decision-maker uses markers – such as membership in a highly-regarded group – as a proxy for underlying performance (Podolny and Phillips 1996). That is, when the evaluator attempts to determine the value of a firm, he can attribute quality to others' regard for

a reference group (Podolny 1993) or past performance of the group (Deepphouse and Suchman 2008).

But decision-making according to these characteristics may also be an important resource used to maintain credibility or to avoid scrutiny, regardless of how they serve to help ascertain quality. A study of performance appraisals by Longenecker, Sims, and Gioia (1987), for example, described political motivations leading to deliberate distortions of employee performance ratings. Often, managers were not concerned with providing accurate ratings, rather the ratings assigned were based on criteria they expected would help them avoid confrontations or avoid looking incompetent. Tziner, Prince, and Murphy (1997) administered a survey to assess the extent to which employee performance appraisals were affected by office politics. Supervisors in this study avoided giving performance marks that may have antagonized others or required additional justification, such as low ratings to vocal employees or high ratings to workers that smacked of favoritism. Emerging research in organizational theory also shows that, at times, evaluators would rather avoid having to justify a decision – especially if things go wrong – by simply coordinating evaluation criteria with widely-accepted beliefs about a firm or its reference group or, by the same token, avoiding criteria which reflect a point of view that goes against these beliefs (Uzzi and Lancaster 2004; Jensen 2006).

An important premise in the current study is that credit agents will be more politically-minded in this regard, as a preemptive approach to managing audience impressions when facing scrutiny, especially at those times when audience attention focused on the ratings' shortcomings is heightened (Elsbach et al. 1998). I expect that agents will delay making as many changes to ratings as possible under heightened scrutiny. However, changes that agents do make should reflect the desire to avoid having to justify a decision.

As previously mentioned, accountability research shows that decision-makers can simplify their decision-making processes when held accountable by adopting a heuristic that proves to be unproblematic among audience members (Tetlock 1983). While such a heuristic is typically based on specific audience preferences (otherwise, the decision-maker will tend to avoid simplifying heuristics), it is possible that the actor will invoke a simplifying strategy, even when these preferences are not known. Recent experimental work by Ridgeway, Correll, Zuckerman, Bloch, and Jank (2011) propose a shift to a “third order belief” when specific views are unclear. They suggest that when specifics of the audience’s beliefs (“second order,” as opposed to the decision maker’s own “first order beliefs”) are unknown, the actor will favor a commonly-known convention or appeal to a universal logic. Here, one can conservatively gamble that the need to justify will be avoided and that decision-making will be simplified. Elsbach (1994) and Suchman (1995) both suggest that organizations can adopt normative procedures or goals to signal legitimacy and conformity to these third-order beliefs. That is, they can adopt practices that reflect conformity to culturally accepted norms as a way to avoid the need to justify behavior. This suggests that, in response to heightened scrutiny, credit agents will base their ratings more heavily on criteria that reflect cultural norms.

Commercial Norms: Calculability and Transparency

As Dun rolled out its ratings format, important changes to the culture of American credit exchange was gaining momentum. In the same way that life insurance diffused in early 19th century America (see Zelizer 1978 for a review) and civil service reform spread at the turn of the century (see Tolbert and Zucker 1983), there was a general movement to rationalize and formalize the management of credit terms between exchange partners during the post-bellum period. Rapid commercial

expansion motivated merchants in the country's large commercial centers to more precisely access, quantify, and calculate elements of a partner's credit risk profile (Oligario 2006). This enlargement of trade, coupled with flaws in slow-moving bankruptcy laws also led larger manufacturers and middlemen to insist that trading partners make their financial and ownership structures more visible. By the 1870s, the use of formal exchange documents and financial statements by merchants in the large commercial centers became widespread (Oligario 2006:140). As Oligario points out, in the years following the Civil War, "(commercial) norms increasingly included the idea that individuals should make their financial statements and record of past behavior available to current and prospective creditors," (Oligario 2006:7), "... suppliers wanted to deal with businesses whose ownership and financial structures could be scrutinized and whose statements could be independently confirmed by local sources" (Oligario 2006:127).

It should be noted that as this post-bellum insistence on calculability and transparency gained momentum among traders, credit reporting firms remained skeptical about the efficacy of these principles as indices of trustworthiness. Credit agents questioned the value of financial and organizational paperwork, as it was often incomplete and inaccurate. Moreover, past experience proved the link between the creditworthiness of their reporting subjects and the transparency of their business practices during this period to be weak. Olegario (1999) demonstrates this in a study of post-bellum Jewish merchants. While the closure and secrecy of Jewish business networks at the time yielded opaque ownership and financing structures, this structure actually served to boost the merchants' economic potential.

Credit-rating agents at Dun and Co. were well aware of the tradeoff between accuracy on one hand and calculability and transparency on the other. At any other period in the agency's history, we might not have expected these agents to use

formality and visibility as principal bases for appraising creditworthiness. Under scrutiny, however, these agents would likely have embraced these principles. If we assume decision-makers are likely to conform to their audience's views as good faith measures to cope with accountability pressure, then credit-rating agents at Dun would likely would have penalized firms lacking transparency and placed more emphasis on precise asset levels when facing intense scrutiny.

Key Periods

Credit reporting activities in the mid-19th century were done during a period of constant scrutiny. However there were key moments in Dun's history when the spotlight on the firm, its ledgers, and its ratings was brightest.

1865 – Forward

The mid-1860s marked a key transitional period for the firm, when Dun made a heavily-promoted entry into the realm of credit rating. The Mercantile Agency released its first ratings book in 1859, continuing to publish volumes until 1861, when the Civil War forced The Dun Agency to suspend production. However, these early ratings books were released with a fair amount of discretion. At this time, the format was treated as a mere accessory to the ledger records, and little if any advertising accompanied their release (Cohen 2012:603). In fact, a public defense of the ratings was issued in 1860, which strongly encouraged the use of the full ledger information when examining ratings. At the same time, internal communications revealed that management was reluctant to issue the books (Cohen 2012:903). Ratings in these earlier books were also limited in scope. Only a single "credit" statistic was included, only a limited geographic area was covered, and many businesses with smaller estimated worth were overlooked (Cohen 2012:903). Furthermore, the Agency

expressly claimed to have consulted others in order to generate many of these ratings (Mercantile Agency 1859).

Following the Civil War, ratings were re-released, with a strong advertising campaign starting in 1865. This same year marked a sharp shift in the firm's information distribution strategy. Up until this time, interface with subscribers was almost exclusively an oral reading of ledger entries to subscribers at the main or local branch offices. In 1865, Dun explicitly moved to include ratings books in their distribution approach. To that end, the agency widened the geographic scope and coverage of their ratings, while making changes to their pricing plan to make it easier for subscribers to purchase the ratings books (Cohen 2012:1899-903). To complement advertising, a public relations campaign was started this year, extolling the virtues of the ratings (despite a private awareness of their flaws and aversion to their use).

From 1865 on, the circulation of these newly-introduced ratings, along with dramatic rise in the rate of new offices being opened, Dun's exposure grew. And though ratings became a larger part of the reporting repertoire, there was a heightened awareness of the information contained in the ledger record. I expect to see changes in the content and management of the ledgers at this point in time, as a consequence of this awareness. There should be a growing concern for source credibility, if not for the functional utility of the information.

1877 – 1878

As subscriptions grew, so did criticism and litigation among evaluated firms. These firms were suspicious of changes to the reporting process, taking advantage of Dun's heightened exposure and the ratings' shortcomings to make their concerns more visible (Madison 1974; Norris 1978). The most vocal critics believed that, "improvements in the quality of [agencies'] service were possible and necessary if they were to earn wide acceptance from American businessmen" (Madison 1974, see

also Earling 1890, Atherton 1946, Wyatt-Brown 1966). The business community, on the other hand, largely recognized the vital function that credit reporting agencies performed (Norris 1978:128; Olegario 2006:168).

The public no doubt took advantage of the financial panic in 1873 to fuel these attacks. The Panic of 1873 was the start of a severe, nationwide economic depression in the United States that lasted until 1878. A series of economic setbacks caused this panic: shifts in US monetary policy, railroad speculation after the Civil War, the 1871 Chicago Fire, and a nationwide influenza epidemic, to name a few. Major financial institutions and manufacturing interests failed during this period, leaving many entrepreneurs in ruin. Subscribers were stuck with these broken businesses – ill-founded relationships with once-trusted entrepreneurs that had been covered by the ratings agencies. In the same way that today’s investors are questioning financial intermediaries regarding their role in reporting on firms that failed during our most recent financial crisis, the public turned to the credit agencies en masse to help make sense of the unexpected failure of so many firms in the mid 1870’s. All ratings agencies – not just Dun – faced a real crisis of trust at this point; already accused of shoddy work, this put even more pressure on them to defend the legitimacy of their claim to evaluative expertise.

Criticism of the ratings industry reached an unexpected high point with the publication of an 1876 exposé by a former Dun employee, Thomas Meagher. This attack centered on the quality of the field reporter and his appraisals, “chance contributions of intelligence from, generally, the least self-respecting and least-liked man in his own community” (Meagher 1876:17-18), and on the ambiguity of the summary ratings. While Meagher’s publication was more passionate than measured, it took stock in the central ideas of the essay. Credit-rating firms such as Dun immediately dismissed his claims, but Meagher was a gifted writer who appealed to

the public's growing distrust of the reporters and their appraisal process (Norris 1978:126).

Until this time, credit-rating firms were generally unshaken by the the slowly mounting public criticism. In the years following the Meagher report, however, ratings agencies such as Dun became especially concerned with the real and perceived threat that this unwanted, unexpected exposé introduced. Perhaps not coincidentally, from 1876-1878, there was a rise in the number of cases being brought to trial involving credit reporting agencies. This litigious activity, together with the looming threat of losing current and potential subscribers, made Dun's management especially worried about the impression customers had of the growing credit-rating industry and its exemplars (Madison 1974); in fact, internal correspondence reveals preparations for a public relations campaign, defending ratings to concerned customers (Norris 1978; Cohen 2012).

Since much of the reporting activity at Dun occurred at the local level, it is possible that there were also local conditions that generated regional variation in the experience Dun professionals had with accountability pressure during the post-bellum period. It so happens that, beginning in 1877, accountability pressure was especially high in the Southern States. This was the end of the Reconstruction Era in the U.S., and with the Compromise of 1877, Army intervention in the South ceased. Citizens in the North were wary of Southerners during the decades following the Civil War, and this sudden removal of local governance left Northern merchants concerned about the political and commercial stability in the region (Doyle 1990). Local credit reporters were the crutch on which these merchants leaned for information and assurance (Norris 1978). I expect that the drive to protect the reputation of the agency was acute in this geographic location.

CHAPTER 3

EXAMINATION OF CREDIT RATINGS

Data for Examining Credit Ratings

One of the strengths of 19th Century credit-rating as a research site is the availability of data on credit scores and firm characteristics. The study employs data from the R. G. Dun Reference Book, the most extensive listing of business classifications and credit-ratings in the 19th century (Norris 1978). To focus attention on the period of intense public censure at Dun, I sampled firm data from 1866-1880 in the Reference Book, focusing on activity from 1871-1880. In 1870, across all geographic areas it covered, Dun listed credit information for 430,573 proprietary enterprises; ten years later, the total was roughly 764,000 (Vose 1916). I narrowed my sampling frame so that all sampled businesses would be located in a region where institutional and economic conditions were relatively homogeneous. I also chose a geographic area where reported firms would best represent the kinds of firms that required the intervention of an information intermediary or expert – an area that was geographically distant and embedded in local customs, practices, and economic conditions that customers may not have been able to readily appraise on their own. I chose the Cotton South as a strategic site for empirical analysis – specifically the coastal cities of New Orleans and Charleston, which were both central Southern commercial hubs and home to the two primary local Dun offices operating in the South. The fitness of firms in these two cities was strongly tied to the success of a single commodity crop, even when those enterprises did not directly engage in the production or distribution of cotton, and the context within which firms operated was distinct from that of the typical Northeast trader. Specifically, the Southern cities explored in this study experienced exogenous change related to Reconstruction. As

expressed earlier, one can imagine that such change elevated concern for the fitness and transparency of businesses plying their trade in this region.

The July 1870 edition of the Reference Book identified 19,929 businesses in the larger Cotton South; the July 1880 edition contained 31,673 organizations in the region (approximately 4% of all firms enumerated by Dun). From the two major commercial centers therein, I focus on a sample of 10,604 – proprietorships that operated for at least two years each from 1871-1880.¹² For each case, information was coded on the business location, name(s) of proprietor(s), proprietor demographics, governance structure of the business, capital assets, industrial classification, and credit-rating history. Using proprietor names, I linked businesses that had a common first and (where applicable) disclosed second owner from year to year.¹³ List-wise deletion removed cases that were either cross-listed duplicates, had missing information on capital assets, or were only reported for a single year, leaving 9,664 cases for purposes of multivariate analysis.

Variables

Dependent Variable

“*Credit Ratings.*” Credit evaluations serve as the dependent variable in the analysis. These measures of creditworthiness were core elements of the new reporting format introduced in limited scope by Dun just prior to the Civil War, and then sold

¹² Data from 1861-1870 were used as needed in order to calculate historical measures for each firm, such as prior failure and length of credit history.

¹³ The addition or subtraction of third (or more)-listed owners or undisclosed investors (“& co”) would be treated in Dun records as noteworthy, substantial changes in the outward appearance (“style”), asset level, and human or social capital of the firm. Nevertheless, formal dissolution of the firm typically only occurred when first or second disclosed proprietors were changed. It is worth noting here that firms often carried on as ongoing concerns after such dissolutions. The impact of this imprinting on the evaluation of such firms by repeat customers and reporters is a topic I am addressing in my own ongoing research. However, for the purpose of this study, tracking these histories would not have been practical.

thorough the widespread distribution of their Reference Books in the years that followed. In summarizing the credit worthiness of an enterprise, correspondents were instructed to consider factors such as capital assets, the “nature, extent and hazard of business,” qualifications of proprietors, and firm strengths and weaknesses (Norris 1978:55). During the postbellum period, firms were ranked among seven credit categories, ranging from “A1” for a respected firm with unlimited credit, and “1” or “1.5” for firms with strong credit ratings, down to “2” or “2.5” indicating good credit, “3” indicating fair credit, and “3.5” indicating an undesirable credit report. The distribution of ratings was highly skewed, with many businesses receiving undesirable ratings (roughly 55% in the Cotton South) and few receiving strong or unlimited credit endorsements (less than 2% at a rating of 1.5 or higher). For purposes of analysis, ratings were reverse-coded into an ordinal scale ranging from “1” (undesirable report) to “7” (unlimited credit).

Key Independent Measures

The selection of predictor variables here was designed to first gauge Dun’s attempts at conformity. Of key interest are two structural dimensions of appraised firms that are among the most prominent in the literature on mid-19th century credit reporting – dimensions tied to the norms of *calculability* and *transparency* that had emerged in the U.S. business community by the 1830s and 1840s.

The dimension that most directly reflected conformity to norms of calculability – the growing demand in the business community for more systematic, quantitative reporting procedures – was *capital assets*. Despite shortcomings addressed earlier, using capital as a measure of creditworthiness suggested to a potentially critical audience a level precision and neutrality. This kind of quantitative information grants the organization a certain level of source credibility (Porter 1995) – a legitimate means to an end, despite variation in the technical quality of its outcomes, that protects it

from immediate sanctions (Meyer and Rowan 1977). Capital is captured directly, here, through Dun's "pecuniary strength" classification – the ten-category scale that was actually recorded in Reference Books just alongside credit ratings themselves. Dun professionals used these scores to rank firms that ranged from the smallest enterprises (referenced by the code "K") with less than \$2,000 in working capital to the largest firms (referenced by "A+") possessing more than one million dollars in capital assets. Although a firm's assets were logically independent from its sister credit-rating, R.G. Dun emphasized that assessments of capital worth should be an important criteria for the evaluations offered by his agents, leading to a high correlation between these measures. For purposes of analysis, I converted capital assets into a continuous measure using mid-point estimation and logged the measure to reduce skewness. The small number of top-coded firms (N=245) were assigned assets of one-and-a-half million dollars prior to log transformation.

As mentioned previously, the mid-19th Century business community also pushed for greater transparency in business transactions and relationship building. Transparency can be thought of broadly as openness and access to information (Stiglitz 2002), and, in the context of credit reporting, transparency can be determined by either the behavior of the firm (information sought directly by Dun professionals could be refused by the firm's proprietor or management team, for example) or by the existence of certain structural properties.

To operationalize transparency, I considered the following six structural variables that could plausibly gauge transparency – or the lack thereof — that Dun agents might face when appraising a firm.

Hybridity is a binary indicator that equals one for any firm that is listed as belonging to more than one unrelated line of business. Organizations that span boundaries in this way present problems for the observer. Experts and more general

audiences come to associate certain features with particular categories and evaluate organizations on that basis. Because organizations that span multiple lines-of-business are unlikely to feature the prototypical features of each one – they make it difficult for others to match performance with expectations at the individual category level and record results according to a unified standard (Hannan et al. 2007). Dun agents were sensitive, themselves, to such problems of classification. During the post-bellum period, Dun agents categorized firms according to an internally-developed industrial classification scheme and met firms that failed to fit cleanly within this classification scheme with discounted ratings (Ruef and Patterson 2009b).

It should be noted that the 1870s were still a transitional period in the evolutionary and institutional history of this scheme. Dun professionals were still learning the scheme and so were less likely to have strong, taken-for-granted expectations anchored in particular categories. Furthermore, it was not uncommon for many firms during the decade – especially those outside urban areas of commerce – to engage in diversified trade that defied classification. In some rural locales, hybridity appeared to be the norm, rather than the exception. However, agents in the larger cities had greater exposure to and experience with the scheme, for metropolitan areas such as New Orleans and Charleston housed long-standing local Dun offices with professionals that had the most tenure and know-how (Norris 1978). Furthermore, the division of labor among businesses in these commercial centers was much more well-defined than in rural areas, and trade was more specialized (see Ruef and Patterson 2009a). Consequently, the classification scheme used by agents more closely mapped the folk taxonomy of the business community, who, by the 1870s, “already questioned whether a proprietor could functionally combine the skills of [trades such as the] apothecary and grocer” (Ruef and Patterson 2009b). This concept is perhaps most important, as the heightened reliance on transparency as a matter of conformity was

much less about the agents' own, intrinsic, cognitive problems of meaning than about their motivation to strategically match the normative position of their audience and its basis.

Wholesale is a binary indicator that equals one (each) for any firm listed in the Reference Books as belonging to the wholesale trade. The wholesaler of the 19th century was central to the early, pre-Civil War growth of trade volume across the United States. Acting as a marketing intermediary for manufacturers of non-agricultural goods, the autonomous wholesale merchant shipped products across various geographic markets to retailers or to the final consumer. Mid-century manufacturers did not have the financial or managerial resources needed to support the sale of goods to distant urban centers, and, thus needed this intermediary to penetrate these markets (Porter and Livesay 1971). Not unlike ratings agencies themselves, wholesale merchants typically operated a decentralized network of physical offices in distant urban centers – nearly 5% of firms in New Orleans and Charleston from 1871-1880 were listed as wholesalers – with central proprietorship located centrally in a Northeastern trade center such as New York or Boston. While most wholesale merchants specialized in one line of business, on first contact, customers, suppliers, and creditors dealing with these enterprises faced considerable uncertainty as to how much inventory or labor was devoted to a particular geographic market and, in some cases, whether such commitments were stable throughout the year or subject to seasonal variation. This type of structural arrangement, like the hybrid form, reduced the firm's transparency.

With the reduced cost of distant trade in the years following the Civil War, the structure of markets for non-agricultural goods changed. Manufacturers were able to develop devoted merchandising and marketing systems that were independent of the autonomous wholesaler (Porter and Livesay 1971). Middle-men that had once been

intermediaries for the large sugar and cotton plantations in the Southern ports were now re-emerging as dedicated representatives of the manufacturer. During the Reconstruction period, these “agents” – over 10% of the firms in New Orleans and Charleston – formed a profitable segment of the coastal city landscape than began to rival the incumbent wholesaler. Nevertheless, tracking assets for these firms was often hit or miss, for their operations were typically subsidized by the manufacturer they represented. Out-of-town assets and activities were difficult for potential business partners to monitor effectively, again presenting transparency problems. It should be noted that, as a heuristic, membership in either the wholesale trade or structural position as a manufacturer’s agent could be a proxy for above average performance or even a status marker. Collectively, these firms were, according to listed assets, four times the size of all other firms (\$150k vs. \$40k) sampled from New Orleans and Charleston. Over half of these businesses were involved in shipping high status luxury goods (65% vs. 25% other firms; see Marler 2010 for post-bellum stratification of trades in New Orleans), and had a coverage history with Dun that lasted nearly a year longer than other firms. I expect that reduced ratings for these types of firms would have been based on their opaque structures, not on their realized or perceived financial performance.

A challenge similar in nature to the opacity of the manufacturer’s agent structure existed with firms listed in the *undisclosed partner* style. A firm listed as “A. Smith & Co.” was effectively a partnership, involving one or more unnamed investors (the “co(s)”, in Dun vernacular), who trusted Smith with the physical management of the firm’s day to day affairs, which was not an uncommon organizational structure (over 16% of firms in sample listed “& co”). However, suppliers expressed the desire to deal with firms whose ownership could be more closely scrutinized and independently confirmed (Oligario 2006:127).

Opacity might also lie in the division of responsibility within a disclosed partnership. Upon detailed inspection of ledger records, I determined that proprietorships typically take on an additional partner for one of three reasons: for additional capital, for greater expertise (especially when diversifying into an unfamiliar line of business), or out of loyalty (a former clerk or family member brought on board in a low-ante arrangement, after years of administrative service). Unfortunately for the potential exchange partner, it is unclear which of these reasons form the basis of a partnership. Asset level or line of business changes might provide a clue, but this requires more than the cross-sectional snapshot provided in the Reference Books. For this reason, I include fully-disclosed *partnership* among the plausible measures of transparency.

Lastly, I include *female*-run businesses as a structural dimension. Often, such businesses were only nominally run by women. To protect themselves from collections activities, husbands or male relatives were often the true proprietors of these firms, making the firm and its potential difficult to appraise. It should be noted that even firms legitimately run by women were suspect during this period. The 19th century business community questioned the commitment of female proprietors, thought to consider running a business only a temporary endeavor, en route to marriage and family (Olegario 2006:110). Furthermore, firms typically owned by women were, on average, thinly capitalized – not expected to be very profitable. Nevertheless, the lack of transparency was among the possible concerns driving the evaluation of these firms.

Factor Analysis

To assess my intuition, I conducted an exploratory factor analysis (Kim and Mueller 1978) for these structural characteristics, expecting to find these measures cluster into a group around a common “opacity” dimension. I replaced means for

missing values whenever encountered for these variables, and then I extracted the factors revealed by this technique. Using a principal component method, I extracted those factors with eigenvalues greater than 1. I then generated the loadings shown in Table 1 by applying varimax rotation techniques and counting components with loadings greater than .60 on any given factor as related to one another.

Four of the six structural characteristics cluster fairly cleanly into two groups. Hybrid and wholesaler dimensions appear to be linked, as are agent and undisclosed partnership. Disclosed partnership style and female ownership contribute only moderately to these dimensions. Such relationships suggest that four of the six measures are related, but that separate discounts exist for lack of domain transparency (wholesaler, hybrid) and for lack of proprietor transparency (agent, undisclosed partnership). Negative values are noteworthy, implying that organizations that are opaque in one area might, to some small degree, tend toward transparency in another. Factor analyses applied to an expanded sample reveals an additional relationship between wholesaler and agent with shared negative value – a relationship consistent with the noted high performance of these trades during the early Reconstruction period (Porter and Livesay 1971; Marler 2010). While this relationship is not quite strong enough to exceed the stated eigenvalue threshold in the primary factor analysis, the competing influences – regard for performance vs. aversion to opacity – are remarkable. Because the two extracted factors alone contribute to close to 50 percent of the variance in the structural characteristics, one might be compelled to include the corresponding factor scores in further analyses. However, because a percentage score above 50 is more commonly acceptable, and given the extra wrinkle of texture due to the possible wholesaler – agent relationship, I decided that the aforementioned measures should be included individually to avoid unnecessary difficulties of measurement and interpretation.

Table 1. Performance Comparisons, by Category

		Period 1 1871-1876	Period 2 1877-1878	Period 3 1879-1880
Mean Change in Assets (\$1000s log)				
	Wholesale	0.17 *	0.26 *	-0.02
	Other	0.00 *	0.09 *	0.03
	(Mfr)			
	Agent	-0.01	0.16	-0.06 *
	Other	0.01	0.09	0.05 *
	Hybrid	0.11 **	0.05	-0.05
	Other	0.02 **	0.00	-0.02
	Undiscl			
	Ptnr	0.17 ***	0.23 ***	0.07 *
	Other	0.05 ***	0.04 ***	-0.02 *
Proportion of Firms Failing				
	Wholesale	0.03	0.03	0.02
	Other	0.04	0.03	0.03
	(Mfr)			
	Agent	0.06 ***	0.06 ***	0.06 ***
	Other	0.03 ***	0.03 ***	0.02 ***
	Hybrid	0.03	0.02	0.05
	Other	0.03	0.03	0.03
	Undiscl			
	Ptnr	0.02	0.02	0.05
	Other	0.03	0.03	0.03

* p < .05; ** p < .01; *** p < .001

Statistical Test of Performance Differences

To assess my intuition further, I performed a series of statistical tests to determine the relative performance of firms with these transparency-related structural characteristics, which is to judge whether changes in credit rating criteria emphases are based on performance impact, rather than on cultural impact. Table 2 reports the mean change in assets and failure proportions – for each structural category – relative to other firms, with significance levels coming from t-tests and test of proportions, respectively. Each period is listed independently here, revealing changes in relative performance through the period of heightened accountability. If changes in emphasis on structural characteristics when assigning ratings were based on performance impact, then there should be a remarkable decline in mean asset change during the 1877-1878 period for each of these categories and a remarkable rise in failure rates.

Table 2. Rotated Factor Solution for Proprietor and Domain Opacity (N=9664)

Variable	Factor 1 (proprietor)	Factor 2 (domain)	Uniqueness
Wholesale	0.0006	0.807	0.349
Hybrid	-0.182	0.640	0.558
(Mfr) Agent	0.775	-0.210	0.356
Undisclosed Partner	0.580	0.384	0.517
Partnership	0.486	-0.019	0.763
Female	-0.413	-0.184	0.796

As these statistics show, the only apparent erosion in the performance of evaluated firms is among hybrids in period 2, though these results are not significant.

Additional Variables

Though “female” and “partnership” do not fall neatly into one of the two opacity groups and indicated in the above factor analysis, I do list them as separate controls. Partnerships are becoming an increasingly less popular form of organizing in the port cities of the Cotton South during my window of observation – 21% partnerships in 1871 vs. 18% in 1880 – a trend that may be reflected in the ratings. Transparency issues aside, female proprietorship might also be discounted based on separate character concerns. Members of the 19th century business community often believed that women had a fleeting involvement in business affairs, considering proprietorship a “stepping stone” to other pursuits, such as marriage and raising a family (Olegario 2006:110). Other characteristics of proprietors (e.g. ethnicity, religious background, etc.) are unavailable in the Reference Book, but are controlled for indirectly by clustering standard errors among repeated observations at the firm level. I also control for proprietor “credit history,” with a running tally of the number of years the firm has been listed in the Reference Book. As a final measure of capacity – the proprietor’s ability to run a business effectively – I record “past failure” as a binary indicator that equals one for any firm that had previously been assigned a “blank” for both asset level and credit-rating. Using Reference Book data from 1866-1879, I identified periods where the firm had been assigned neither a credit score nor an asset value. Ledger material revealed that both the New Orleans and the Charleston offices assigned a double blank when a firm experienced failure. Failure, in this case, refers to firms that either (a) went bankrupt, (b) were sued for nonpayment, (c) failed, or (d) had to arrange an extension, assignment or compromise on their debts were considered to have failed. Verification through sampling suggests that 95% of all

double blanks accurately report business failure. Firms that simply closed down, where one partner bought out the other, or where the owner retired or moved away, did not receive these double blanks.

In addition to the aforementioned organizational characteristics, I also examine local market conditions and their effect on credit ratings. I suspect that a greater focus on legitimacy and impression management during the period of heightened accountability might lead to a greater focus on the firm itself, and not on the larger context.¹⁴ To control for the expected performance at the industry level, I also reported the “number of failures” each year within the firm’s principal line of business. Although I strategically limited observations to those in New Orleans and Charleston to ensure cultural and economic consistency, I include fixed effects for firms that were assigned ratings by the “New Orleans” branch office to address the possibility that specific geographic market conditions affected credit scores.

“*Rating, n-1*” is simply a lagged dependent variable to provide evidence of “stickiness” – how dependent the raters were on past evaluations during the censure period. The higher the coefficient, the more influence the previous rating had on current assignment. In subsequent analyses, I explore the stability of ratings during the period of heightened accountability, drawing attention to the nuances of this relationship. For the current analysis, I simply wished to control for any anchoring effects (Kahneman and Tversky 1979) past ratings may have on current views of a firm’s creditworthiness. I was concerned that there was memory recall associated with more distant changes that might also contribute significantly to the assignment of ratings. However, a supplemental analysis substituting an average of past ratings for

¹⁴ Samples of ledger entries described in later sections were used to sketch trends across the entire 1866-1880 period. However, a preliminary examination of 1877-1878 suggests that Dun professionals were a little less likely to contextualize poor performance (e.g., “but for the times”) than before.

this one-year lag revealed no significant difference in the results, and I do not report the results from this analysis.

Analysis – Ordered Logit Analysis

Credit-Ratings

I use an ordered logit specification to examine credit rating scores and predict the ranking of each firm in the Dun credit-rating system. Model specifications considered which criteria were correlated with credit evaluation and whether the effect of parameters of theoretical interest during the period of heightened accountability (1877-78) differed from both earlier (1871-1876) and later periods (1878-1880) in magnitude and significance. As noted earlier, because I use data with repeated observations from each proprietorship in this analysis, I specify the models so that standard errors are clustered at the firm level.

Results

Table 3 reports the effect of structural characteristics and various controls on credit ratings for three periods. First, model (1) provides a baseline model with results from the pooled sample of credit ratings from all years. Here, estimates suggest that a lack of focus was penalized by Dun agents. Results here suggest that, throughout the observation window, firms with greater capital asset levels have better credit ratings. A sole proprietorship that only had \$1,000 in assets in 1871 could expect an undesirable credit report (“3.5” rating, net of other factors). However, a proprietorship that had \$100,000 in assets could expect a strong credit report (“1.5” rating). Examining these pooled results makes it difficult to draw a conclusion about lower domain transparency – being either a wholesale or hybrid firm. Wholesale firms are more likely to receive a higher rating here, while hybrid firms are less likely to receive one. Similarly, conclusions about proprietor transparency are difficult to make here.

Firms serving as manufacturing agents receive disproportionately higher ratings, while ratings for undisclosed partnerships are disproportionately lower. Firms that had failed in the past were penalized, as were firms with longer ratings histories. Past research provides evidence to the contrary – suggesting more generous scores were assigned to firms with longer histories (Ruef and Patterson 2009b). Perhaps this practice is a reflection of the greater number of rural businesses examined in this earlier work, for the length of credit coverage outside the metropolitan centers was much shorter (firms in the current study – exclusively from New Orleans and Charleston – had credit histories that were over twice as long). The length of credit history could be a proxy for the age of the firm’s proprietors, and age had a mixed effect on creditworthiness assessments. Older business owners had more experience, and therefore were thought more capable, while the most advanced in years were considered less likely to have the time to settle a bad debt (Mercantile Agency 1853; Oligario 2006:107). Findings regarding other structural characteristics – undisclosed partnership arrangements and female managements – are insignificant. Local market conditions, on the other hand, do seem to influence ratings. Firms in New Orleans tend to receive lower ratings, as do firms in higher-failing industries, as expected.

Table 3. Coefficients from the Regression (Ordered Logit Model) of Dun Credit Ratings on Organizational Attributes (N = 9664)

Independent Variable	Model 1 All Years	Model 2 1871- 1876	Model 3 1877- 1878	Model 4 1879- 1880
Calculability				
Assets (\$1000s, log)	3.808 ***	3.513 **	4.169 **	4.682 **
Transparency				
Wholesale	0.472 ***	0.399 *	0.073	0.824 **
Hybrid	-1.123 **	-1.049 **	-1.596 ***	-1.323 *
(Mfr) Agent	0.298 **	0.245 *	-0.105	0.463 **
Undiscl Partner	-0.179 *	-0.098	-0.177 *	-0.303
Proprietor Profile				
Partnership	-0.052	-0.082	-0.117	0.042
Female	0.306	0.311	0.645	0.428
Firm History				
Former Fail	-0.623 *	0.002	-1.712 ***	-1.145 ***
Credit History (yrs)	-0.046 **	-0.004	-0.005	-0.004
Credit Rating, t-1	1.863 ***	1.760 **	2.499 **	1.740 **
Local Market Conditions				
New Orleans	-0.548	-0.727 *	-0.067	-0.162
# Fails, Industry Level	-0.109	-0.111 *	-0.086	-0.099
-2 Log Pseudo-Likelihood	4585.33	2410.12	-757.85	1264.05
# Observations	9664	4462	2004	3198

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tailed tests for hypothesized effects, two-tailed otherwise)

In model (2), I examine credit rating during the 1871-1876 period, which are among the earliest ratings released by Dun. Local offices are uncomfortable with this initial move to add the ratings format to their repertoire, but hints of sensitivity to external criticism should be more pronounced during the subsequent period of heightened accountability. Consistent with pooled results, discounted ratings are associated with hybridity and low industry-level performance; larger firms (higher asset level), wholesalers, firms serving as manufacturing agents, and those with relatively high ratings the prior year are more likely to receive higher ratings. If agents intend to mask or distract attention from their ratings – anticipating controversy – by adopting ratings criteria that appear more rational and prudent, then these parameter estimates should change during the 1877-1878 period in notable ways. Ratings professionals should be more generous with the ratings assigned to larger firms during this period. That is, appraisals should be based more heavily on asset level, signaling a stronger devotion to the principal of calculability. There should also be more severe punishments for hybrid firms and undisclosed partnerships, reflecting Dun’s conformity to norms of transparency in their domain and proprietor forms. Along these same lines, there should be a change in the parameter estimates for wholesale (lack of domain transparency) and agent (lack of proprietor transparency) fixed effects. Because these types of firms are generally well-regarded throughout the window of observation (1871-1880), the positive coefficients for these two measures seen in the 1871-1876 period should subsequently drop in magnitude and significance from 1877-1878 to support conformity claims.

Model (3) gives the regression results for this second period. The effect of asset level grows markedly here (Wald test $\chi^2 = 7.51$, $p < .01$), suggesting that a greater emphasis is being placed on this dimension as contextual changes raise Dun’s accountability levels. At the same time, the changes in fixed effects for wholesale

(Wald test $\chi^2 = 2.76$, $p < .05$) and hybrid firms (Wald test $\chi^2 = 1.69$, $p < .01$) suggest a growing concern for domain transparency. More precisely, domain transparency concerns during period 2 offset the earlier regard Dun had for wholesale firms (decrease in magnitude and significance of the positive coefficient), while earlier punishment for hybrid forms becomes more severe during this period (increase in magnitude and significance of the negative coefficient). Similarly, a change in fixed effects for firms serving as manufacturing agents (decrease in magnitude and significance of the positive coefficient; Wald test $\chi^2 = 6.18$, $p < .05$) reveals a growing concern for proprietor transparency. A quick look at the different coefficients for undisclosed partnerships seems to provide additional evidence of penalties accruing for a lack of proprietor transparency. However, significance tests for coefficients do not provide strong support for parameter fluctuation in this case.

Other changes offer hints that the pressure to adopt a more impression-motivated credit rating process during this period changed not only the nature but also the scope of ratings criteria. While, on one hand, firms that had failed previously faced stronger penalties during this period – effects for prior failure were greater in both magnitude and significance (Wald test $\chi^2 = 10.14$, $p < .05$) – ratings professionals seemed to pay less attention to the context of a firm's performance. Local market conditions reflected in fixed effects for city ("New Orleans") decreased in magnitude and significance (Wald test $\chi^2 = 9.25$, $p < .01$), as did those reflected in the number of failures among others in the firm's industry, albeit much more modestly (Wald test $\chi^2 = .95$, $p < .10$). Greater dependence on past ratings is consistent with these findings. The coefficient for the lagged dependent variable is greater in magnitude in period 2 (Wald test $\chi^2 = 10.69$, $p < .001$), and changes in predicted probabilities show that ratings are 13% more likely to stay the same from year to year, which is to say that ratings professionals are likely more myopic in their ratings approach – ceremonially

employing external assessment criteria and dismissing a more comprehensive definition of worth that may dampen a strong conformity signal.

If conformity pressures are strongest under conditions of heightened accountability, then most key parameter estimates should shift once again during the 1879-1880 period, as audience attention to ratings subsides. Model (4) gives the regression results for this third period. As expected, changes in fixed effects for wholesale firms (Wald test $\chi^2 = 4.71$, $p < .05$) suggest less of a concern for domain transparency and a return to the earlier regard Dun had for wholesale firms (increase in magnitude and significance of the positive coefficient) in period 1. Hybrid firms seem to suffer fewer penalties, though results are not quite as conclusive (Wald test $\chi^2 = .82$, $p < .10$). Though effects related to undisclosed partnerships are inconclusive, a change in fixed effects for firms serving as manufacturing agents (increase in magnitude and significance of the positive coefficient; Wald test $\chi^2 = 6.77$, $p < .01$) also reveals less of a concern for proprietor transparency. In an unexpected twist, the coefficient for asset level during period 3 is not significantly different from the coefficient in period 2. Though, as prior research suggests (Norris 1978; Ruef and Patterson 2009b), the importance of firms' capital assets in assessing creditworthiness not only increased during the window of observation, but also led to a permanent change in firm policy. Management made it clear to ratings professionals that "there should be a constant effort to keep the credit marking [of firms] in close relation to [their] capital marking" (quoted in Norris 1978:93). Furthermore, a key to asset level categories and credit ratings in the Reference Book was made available throughout the window of observation, published in a "side-by-side" style that clearly suggested a strong relationship between the two measures.

Results for period 3 suggest a very modest decrease in emphasis on firm-level failure, as well as modest increases in emphasis on local market conditions, indicating

the agency's willingness to attribute performance to the larger economic climate. A change in lagged dependent variable effects is pronounced (Wald test $\chi^2 = 9.24$, $p < .01$), indicating less reliance than previously on past ratings. Together, these results suggest a slightly wider lens is being used to appraise firms as accountability pressure subsides.

Analysis – Ratings Change / Multinomial Logit Analyses

To examine ratings changes more intuitively than in ordered logit specifications, I performed a multinomial analysis, classifying credit rating outcomes into three categories: increase, decrease, and no change.¹⁵ These outcomes were measured as changes to credit scores recorded from the previous to the current reporting period. I used this method of analysis to estimate simultaneous logistic regression models with pairwise comparisons of credit rating increase and credit rating decrease against the base category of no change. Two models reported in Table 4 were estimated; model 1 included organizational characteristics (changes in assets, partnership structure, and industry) and location as controls. Then model 2 added a 0-1 indicator variable for ratings occurring during the years of heightened accountability, 1877-1878, as well as terms assessing the sign and significance of the aforementioned controls during this accountability period by interacting these terms with the 0-1 indicator. Claims about the stability of ratings are supported if the standalone 0-1 indicator term is negative and significant for both increase and decrease estimates, because after controlling for other factors that predict ratings movement, it will indicate a general tendency toward the base “no change” category from 1877-1888.

¹⁵ A separate category – the assignment of a “non”-rating – was also possible. The results listed here prove robust to the inclusion of this fourth category.

Table 4. Coefficient Estimates for the Multinomial Logit Model (N=9664)

Variables	Model 1		Model 2	
	Rating Decrease	Rating Increase	Rating Decrease	Rating Increase
Asset, Change (\$1000s, log)	-1.761 ***	2.481 ***	-1.718 ***	2.322 ***
Change to WS/Agent	0.929 *	0.588	0.570	0.968
Undiscl Ptnr Added	0.844 ***	0.262	0.756 **	0.101
Undiscl Ptnr Dropped	0.786 ***	0.621 *	0.698 **	0.693 *
Unrel Business Added	1.225 **	0.848	1.776 **	0.969
Unrel Business Dropped	-0.442	1.232 **	-0.259	1.914 **
New Orleans	0.205 *	0.411 ***	0.177 *	0.408 ***
Mid Period (1877-1878)	-	-	-0.337 ***	-0.316 *
Mid X Asset, Change	-	-	-0.176	0.680 **
Mid X Change to WS/Agent	-	-	1.141	-3.982 ***
Mid X Undiscl Ptnr Added	-	-	0.401	0.540
Mid X Undiscl Ptnr Dropped	-	-	0.336	-0.363
Mid X Unrel Business Added	-	-	-13.733 ***	-0.591
Mid X Unrel Business Dropped	-	-	-11.985 ***	-15.423 ***
Constant	-2.663 ***	-3.407 ***	-2.548 ***	-3.322 ***
Chi-square	340.29***		1594.94***	

* p < .05; ** p < .01; *** p < .001 (one-tailed tests for hypothesized effects, two-tailed otherwise)

For the purposes of assessing the dynamic nature of ratings, I regressed the aforementioned ratings changes on change during the same measurement period in the relevant controls: change in asset level, shift into a line-of-business with lower transparency (wholesale and manufacturing agent, combined), addition or subtraction of an unrelated line-of-business (hybridity), and addition or subtraction of an undisclosed partner. The pattern of results for the period of heightened accountability reported here is consistent with my study's underlying premises that signaling and filtering effects will be more pronounced at a time when Dun professionals anticipate failure.

Testing the effect of adding the 1877-1878 term to the control model indicates a significant difference in rating change during this period ($\chi^2 = 18.18$, $p < .01$, $df=2$), substantively showing that changes in ratings are significantly different during this period of heightened accountability. Since the standalone 0-1 indicator term is, indeed, negative and significant for both increase and decrease estimates, as expected, the model provides evidence of greater ratings stability during this time. That is, fixed effects for the heightened accountability period following the release of the ratings reporting format indicated a negative relationship between accountability pressure and change. Predicted probabilities were calculated both for the 1877-78 observations and for the remainder of the observations during the window of observation (earlier and later periods), using average values for the control measures. Results show that ratings under these conditions are nearly 11% less likely to change during the 1877-1878 period. These differences are also substantial when comparing raw percentages. During the heightened accountability period, 29% of firms under review experienced a ratings increase or decrease; during the rest of the window of observation from 1871-1880, a little over 44% of firms experienced change.

Analysis – Performance Changes

To clarify better the distinction between symbolic and quality-based motivations driving the emphasis placed on ratings criteria, attention should be directed to Figure 1 – a final analysis designed to help add texture to the regression results. For each failure that I used to calculate the control variable “# Fails,” I examined the reporting periods leading up to the result.

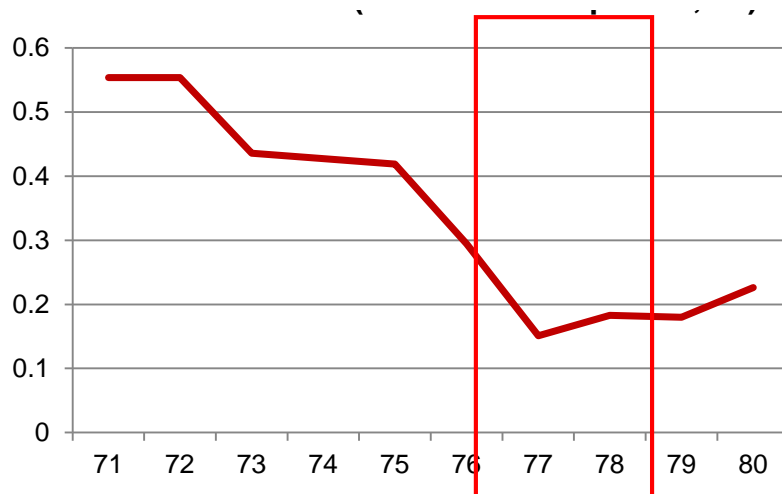


Figure 1. Percent failures anticipated (1871-1880 sample NO, CH)

If, in the year just prior to a firm’s failure, the agency had either downgraded the firm’s rating or, if not, had assigned the firm an undesirable credit report, then I recorded a “1”. Otherwise, I recorded a “0”. Averaging these scores each year provided a measure of the proportion of failures that were anticipated by the agency. Figure 2 plots these percentages throughout the 1871-80 frame. As this figure seems to suggest, the percent anticipated failures sharply dropped during the period of heightened public scrutiny.

To help support this finding, I included a simple, continuous-time event-history analysis, with a two time-varying covariates, seen here in Table 5. The

outcome measure here is time-until-failure; the time-varying covariates are the firm's credit-rating and geographic location (dummy variable = 1 for "New Orleans"). This approach is similar to a multivariate regression in which the dependent variable is the (unobserved) transition from one state (active firm) to another (failure). Like regression, this technique compares a coefficient estimate to its standard errors, deriving a t-statistic to allow for scientific testing (Tuma and Hannan 1984). Often, when this technique is used, changes in rates are as much a function of time as they are a function of any covariate measured. Several parametric approaches can be used to model this time-event relationship (Tuma and Hannan 1984). As seen in Figure 2, the rate of failure does not follow a simple time-dependent pattern. The rate was originally quite low, rose sharply during the 1873 Panic, and then varied after 1876. When time dependence is likely, but follows no simple parametric shape, a proportional hazards model can be used. Here, the rate of transition is separated into two components: uniform variation, over time, across all observations and variation tied to covariates specific to each member of the data set (Cox 1972). The form for this Cox model is as follows:

$$H(t) = q(t)\exp\{\alpha'X(t)\}$$

The element $h(t)$ is the rate of transition at time t , $q(t)$ is a (possibly) time-dependent nuisance function that is not estimated, $X(t)$ is a vector of the covariates, and α is a vector of the coefficient(s) corresponding to the covariates. Reducing time dependence to this nuisance function effectively frees the model from the need to incorporate a fixed parametric form. For the purposes of this model, events must be treated as singular and non-repeatable. Although there are subtle differences among failures, I treat all failures indicated by Reference Book blank entries for both pecuniary strength and credit rating as equals. Most failures coded this way involved either legal intervention (e.g., "assets seized by sheriff") to settle debts, a softer landing involving

a meeting with creditors, or else proprietors simply absconding and leaving behind a noted (by credit reporters) debt to stakeholders. Given the relatively low percentage of coded failures not fitting one of these descriptions, the inferential risk associated with aggregation is minor. I had data from 1866 onward, and because most firms were observed for less than 6 years, problems with left-censoring were minimal. Data were not complete from 1881 onward, though right-censoring concerns are effectively addressed using the Cox modeling technique (Tuma and Hannan 1984).

Table 5. Coefficients from the Cox Proportional Hazard Model Firm Failure (N = 9664)

Variable	Model 2 1871- 1876		Model 3 1877- 1878		Model 4 1879- 1880	
	Credit Rating	-0.116	**	-0.073		-0.330
New Orleans	0.697	***	1.105	***	1.648	***
Chi-squared	30.77		12.62		12.14	
Observations	4462		2004		3198	

* $p < .05$; ** $p < .01$; *** $p < .001$

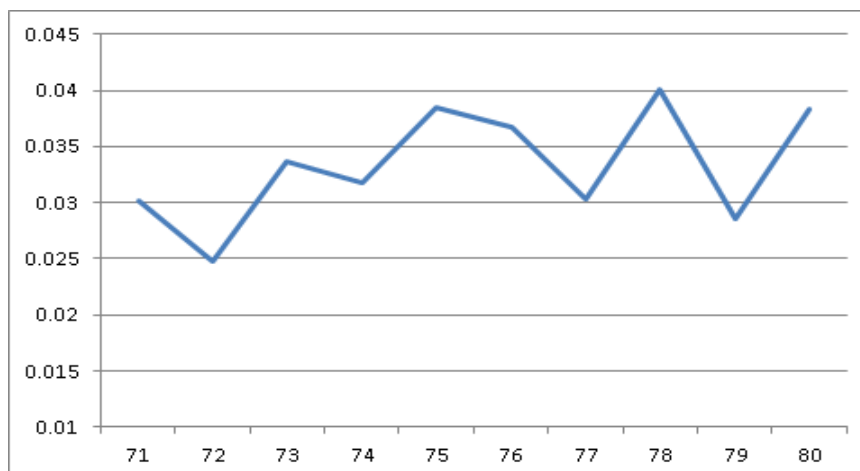


Figure 2: Proportion Firms Failing, 1871-1880

As with earlier regression analyses, I examine three distinct failure periods: 1871-1876, 1877-1878, and 1879-1880. Spells began in 1866, included year-long increments, and ended in 1880 (or were dropped from the risk set upon failure). “Credit rating” was lagged, so that a firm’s estimated risk of failure depended on the rating as measured during the previous year.

Results suggest that credit-ratings were more effective in predicting failure before and after the 1877-1878 period of heightened scrutiny. During both the earlier and later periods, firms were slower to fail if they had a higher credit-rating. However, the effect was larger and more significant in the earlier period.

Discussion

In the decades following the American Civil War, Dun reluctantly provided credit-ratings of firms for customers expanding their trade networks in the growing domestic economy. For a brief period in the 1870s, these ratings were made more visible, putting Dun in a position of greater accountability, bearing a greater burden of justifying ratings that had been performing poorly throughout the decade. This reaction from Dun professionals offers a unique historical window through which symbolic responses to failure by one particular type of organization could be observed.

The regression analyses included here provide evidence to suggest that, when facing heightened accountability, decision-makers may adopt both signaling and filtering strategies to avoid unwanted attention. Ordered logit results show how ratings professionals preemptively demonstrate legitimacy through the use of external decision-making criteria to assign potentially controversial ratings. Multinomial results show how these professionals manipulate outcomes as well as the means under these conditions, minimizing the number of changes to reduce their signature. Together, these results support the claim that organizations may “use preemptive

impression management to affect specific audience behaviors associated with routine organizational events that are ambiguously negative” (Elsbach et al. 1998:69).

What makes this evidence of anticipatory signaling and filtering particularly meaningful is that Dun professionals are taking steps here to avoid confrontation – steps that do not necessarily serve to better predict underlying fitness. As the following analyses begin to show, as Dun professionals react to heightened accountability, the quality of their ratings erode.

CHAPTER 4

EXAMINATION OF CREDIT LEDGERS

Content Analysis

I took multiple steps to examine ledger material, carrying out content analysis on reports submitted by local Dun professionals in New Orleans from 1845 to 1880. The year 1845 was the earliest year that ledger content was recorded in the original records from the firms that I sampled; entries beyond 1880 were often incomplete, due to a transition at Dun from calligraphy-style writing to type-written pages, which were not among the materials in the Harvard Business School collections. I first focused on determining the kinds of information held on file that might be used directly by subscribers.¹⁶ Here, I constructed measures from information distilled in ratings Reference Books (name, assets, trade), as well as information on file for subscriber use but not separately published in these ratings volumes. In order to capture a segment of the population that was exposed to relatively homogeneous economic conditions, I selected reports on 400 firms from a single industry – the wine and liquor trade. In terms of capturing variation among the reports, examining firms from this industry was especially fruitful because this trade had a particularly wide variety of firms (size, tenure, etc.). Dun agents used several kinds of descriptive items to characterize a firm and its ownership. As mentioned, information in these ledger records was wide ranging, from specifics about ownership habits and disposition, to the longevity of firm, to the ethnicity of the firm’s clientele. I coded these records to track this information, and details were collapsed into simple categories. To ensure the reliability and discriminant validity of my constructs, I relied primarily on the

¹⁶ As mentioned earlier, this information was also leaked indirectly to subjects of the appraisals.

three dimensions (capital, character, capacity) used in prior research (e.g., Oligario 2006) and subjected them to preliminary analyses to establish their relationship to credit ratings that were assigned at the time entries were being made in the ledgers. First, estimates of the proprietor's worth – *capital* asset levels (basis for “pecuniary strength” in the reference books) – were recorded as they appeared in each entry. Second, the total number of times a detail related to a proprietor's *character* or *capacity* was mentioned was counted in each entry to the ledger. See Table 6 for the items listed for each type.

Such mentions were divided into four categories: lo character (any critical character mentions), hi character (extreme praise of character), lo capacity (any mentions of capacity shortcomings), and hi capacity (extreme praise of capacity of proprietor[s]).¹⁷ After taking an inventory^{18 19} of the language used to describe firms and their proprietors, I took stock of the volume and timing of ledger information²⁰ so that I could connect these trends to key moments in the history of the firm. Using a much larger data set – 2,103 firms from various industries (17,746 ledger entries from 1845-1880) – data were coded in various ways. First, for each ledger entry, the name

¹⁷ Extensive examination of reference book items revealed that proprietors described with items preceded by “very” or preceded by/followed by “well” (e.g. “stands well”) were treated with relative deference. No such stratification of critical items was evident. Issues of intercoder reliability are important to consider here for future analyses. As these coding decisions are based on latent rather than manifest content, there is enough subjective interpretation here to merit a separate assessment of this content (Potter and Levine-Donnerstein 1999).

¹⁸ A regression of 1866-1880 credit ratings on character, capacity, and estimated worth items was performed, with results establishing that there was a strong, significant relationship between these ledger items and ratings during the post-war period.

¹⁹ A separate regression was performed with mentions of moderate praise from a limited sample of firms. There was no significant relationship between these items and credit ratings, so to reduce the cost of data collection, I did not include these non-superlatives in my analysis of the larger sample.

²⁰ Issues of intercoder reliability are important to consider here, as well. However, when coding textual artifacts, intercoder reliability is more important for latent, rather than manifest content, due to the subjective interpretations coders must make based on their own mental schemata (Potter and Levine-Donnerstein 1999). Because the volume and timing of ledger entries is manifest content, I alone coded all data.

of the evaluated firm, the firm's industry, the date of the entry, the length of the entry (number lines), and a number identifying the correspondent or reporter in the field submitting the information in the entry were recorded.

Table 6. Ledger Items Indicating High/Low Character, Capacity

High Character	Low Character	High Capacity	Low Capacity
	Credit in the Trade		Level of Performance
	Standing in the Trade		Size/Quality/Potential of Customer Base
	Riskiness of Behavior		Experience Level
	Speed/Reliability of Payment		Influence of Family and Friends
	Honesty	–	Health of Proprietor
–	Interaction Difficult	–	Legal Action
–	Low Disposition	–	Natural Disaster
–	Information Gathering Difficult	–	Prior Failure

Building on extent research on the efficacy of communication channels and sources (e.g., Tushman 1977; Allen et al. 1980, Gerstenfeld and Berger 1980), I used these data to appraise the value of ledger reports used by subscribers at the time Dun re-introduced its summary ratings after the Civil War.²¹ At its core, Dun was an information processing system (Tushman and Nadler 1978; Daft and Weick 1984). Knowledge about a firm and its proprietors – facts, insights, conclusions, empirical results – was collected, encoded to become information, and then transferred within and across organizations to be used by various users (Thayer 1968; Rogers and Agarwala-Rogers 1976). The value of any information produced by such a system is largely a function of whether or not users are willing to apply it (Moenaert and Souder 1996). Extant research in MIS asserts that information that is functional – relevant,

²¹ As mentioned earlier, the very first set of ratings were introduced before the Civil War. However, the first full Reference Book edition heavily promoted was at this time.

novel, and comprehensible – and comes from a credible source is likely to be used and accepted by users (Thayer 1968; Larker and Lessig 2007; Ives et al. 1983; Wilton and Meyers 1986). Information *relevance* refers to the extent to which information is appropriate to the user’s goals and activities, and its *novelty* refers to the depth of new insights revealed in the information (Wilton and Meyers 1986). Its *comprehensibility* is the ease with which it can be decoded and understood, and *credibility* is the trust the user has in the information provider (Thayer 1968).

Table 7 provides summary measures from this data, split by period: the earlier 1845-1864 period and the period following heavily-promoted ratings re-introduction, 1865-1880. First, the proportion of ledger entries containing certain content items (with difference in proportions tests included) was calculated. In the top left corner of the table, the first few rows summarize the financial information recorded in the ledgers during each period. Using the data on Wine and Liquor merchants, I draw attention to the proportion of ledger entries providing different levels of specificity. A firm’s estimated worth was listed in the ledgers as either a point estimate, a range of values, or not listed at all. Below these statistics are summaries of subjective information provided by Dun professionals on the same 400 merchants, namely the proportion of entries listing character and capacity.

Table 7. Summary of Content Analysis

	Period 1	Period 2	Period to Period Change in Ratings Value			
	1845-65	1866-80	Credibility	Novelty	Compreh.	Relevance
Proportion \$\$ specific	0.35	0.63	**			
Proportion \$\$ range	0.57	0.34	**	(+)		(-)
Proportion no \$\$ listed	0.08	0.03	*			
Proportion High Char Listed	0.51	0.56	**		(-)	
Proportion Low Char Listed	0.05	0.07				
Proportion High Capacity Listed	0.14	0.36	**		(-)	
Proportion Low Capacity Listed	0.14	0.18				
Proportion Repeat Reporter	0.65	0.80	*	(+)		
Proportion No Change	0.04	0.06	**		(-)	
Report Frequency (# entries/mo.)	1.82	1.80	0.98	1.07		
			(St. Deviations)			
Months Prior to Transition	10.6	15.2	16.8	27.1	(+)	
Months Prior to Reference Book	-	9.9/7.9	12.6	9.1		(-)
Entry Length (# lines)					(+)	
All	0.7	0.9	1.1	1.2		(-)
Transition	1.1	0.9	1.5	1.4		
No Transition	0.6	0.9	1.0	1.2		
Proportion, by Length Category						
1 line or less	0.54	0.42	**			
2-4 lines	0.41	0.51	**			
5+ lines	0.05	0.07	*			

* p < .05; ** p < .01; *** p < .001

Next, using data coded from the larger, 2,103-firm sample, I shift focus away from specifics in the ledger entries and calculate summary measures related to Dun's administrative handling of the ledger entries. First, I list the proportion of entries that were provided by "repeat" agents – agents that had reported on the same firm once before. The sequence of ledger entries on any given firm was usually based on information provided by multiple reporters in the field; it was not uncommon to see a firm that was never evaluated by the same reporter twice.^{22 23} Listed next was the proportion of entries in each period with "no change" entered. When a ledger entry was recorded at a time when no new information was available from the field, the message "no change" (or, abbreviated, "NC") was entered in the ledger.

Then, I listed the frequency of reports per month in each period. The total number of times an entry was added to the ledgers for each firm in each month was counted to determine, for each period, how often Dun was reporting on its firms. Then, I calculated the gap time between the entries recorded at transitions (above) and the most recent entries just prior to these transitions. Extensive examination of ledger entries reveals that Dun reporters in the field took advantage of their proximate positions relative to evaluated firms to anticipate these noteworthy events, often providing a brief signal²⁴ within a year of the events actually happening. Next, I compared ledger entry dates to the exact months that reference books were published. I use data from 1866-1867 and then from 1879-1980, in lieu of pre/post-Civil War periods (no ratings coded during pre-Civil War period), to show how closely ledger

²² While past research has suggested that Dun professionals providing reports from the field became specialized and focused on certain industries, I found no evidence of this in my own data.

²³ My data show that the median length of service by reporters in the field was a little 3 years. The data also show that only a small handful of the over 150 reporters in New Orleans were committed full-time for 2 or 3 years in a row; the median credit history of a firm tracked in the New Orleans ledgers was 5 years.

²⁴ My data suggests that such anticipation notices were most often quite brief. Reporters were careful to report transitions, not effect transitions with verbose reports that may affect performance.

entries precede ratings throughout the decade. Finally, I calculated the average length of each entry (number of lines in the ledger) for each period, which were determined, first, for all entries, then for entries recorded at the time of noteworthy events or “transitions” in a firm’s history (add/drop partner, industry change, failure,²⁵ address change, legal troubles) , and then for all other entries. To add texture, in the bottom left corner, I also provide a breakdown of proportions of ledger entries per period in each of three categories of entry length.

On the right-hand side of the table, I provide a simple appraisal of the changing value of Dun’s reports from the 1845-1865 period to the 1866-1880 period. I use the left-side summary measures as evidence to suggest either improvement or decline along the dimensions of information utility: credibility, novelty, comprehensibility, and relevance. Mentions of asset levels or estimated worth became much more precise in the second period. Given the 18th century business community’s growing emphasis on calculability, this shift undoubtedly sent a conformity signal to Dun’s audience, improving their source credibility. However, it was common knowledge that the accuracy of financial information provided to Dun reporters in the field was very low. Recorded values in the ledgers were often changing, and it did not help a subscriber trying to appraise the riskiness of a firm by absorbing the uncertainty of financial data with the exactness of a point estimate. Thus, a shift to greater specificity made ledger information less appropriate or relevant. In the second period, I also show that the proportion of entries with mentions of high character and high capacity rose. These mentions represent a greater

²⁵ These aforementioned events are all measured in earlier logit analyses.

number of superlatives written about a firm. Handing out high praise more freely – a greater saturation of ledgers with this language – reduces its novelty.²⁶

I also take note of changes in timing and length of ledger entries. In the second period, entries get longer, more often include content from a return reporter, and more closely precede reference book releases. One interpretation here is that Dun professionals are becoming better equipped to handle subscriber or evaluated firm feedback, providing more information from more knowledgeable reporters at the times when the reporting process is more likely to stimulate interest in firms under review (ratings assignment). This more anticipatory posture of Dun professionals puts them in a better position to defend their ratings while, through their presence, acting as a signal of their commitment to their relationship with subscribers (Spence. 1974; Meyer 1979; Tolbert 1985). Altogether, these changes in administrative behavior (having more to say during moments of higher exposure and heightened attention) build second-period source credibility. However, entries do not occur more frequently in the second period than in the first, and seem less sensitive to key events among firms being evaluated. Summary measures for second period frequency do not change significantly, while those for transition-specific timing and length appear to indicate that Dun professionals have less to say in the second period about firms during the most meaningful times in the histories of these firms, making their information less novel and less relevant. Overall, summary measures in Table 7 seem to indicate that the value of information is increasing during Period 2, as a function of a stronger relationship Dun is building with its information users. Under the surface, however, the functional utility of the information in Period 2 seems to be eroding.

²⁶ A regression of credit ratings on mentions of hi-character for both early and then later years within the 1866-1880 frame reveals that the significance and magnitude of the effect of hi-character mentions on ratings sharply declines over time.

That is, the value of Dun's ledger record information is improving in form rather than in substance.

CHAPTER 5

SUMMARY

Reputations are not just a reflection of a firm's performance history. Rather, the link between reputation and performance is moderated by the amount of attention an audience is paying to performance (Rao 1994; Anderson and Shirako 2009). Past research has shown that this link is stronger for certain, more prominent actors (e.g., Merton 1968). I submit here that the link is weaker for actors that tend to blend in. The wallflower may not get the best dancer, but will likely save a fractured toe or two by avoiding the worst. Following this logic, if a firm can minimize the impact of poor performance on its reputation by blending in, it will be most likely to do so in situations where the risk of being singled out is greatest.

In this study, I examine mid-19th century credit reporting and how credit reporting professionals addressed their own poor performance. Through an inspection of two reporting formats, I provide evidence to suggest that these experts do try to blend in by distorting their reports and manipulating their data collection and reporting procedures. Furthermore, this evidence suggests that these reputation-preservation tactics do appear at moments when they were at risk of being singled out. That is, when accountability pressure – the pressure to justify decisions and outcomes – was heightened, they tried to mask their poor performance by minimizing their own informational signal. When they needed to disappear most, impression management tactics appeared.

The firm studied here – R.G. Dun and Co. (Dun – successor to the Mercantile Agency) was at risk of being singled out at two key moments: (a) at the time of the release of the more underperforming of the two aforementioned reporting formats (ratings) and (b) at the time of extreme public censure following this release.

At these moments when accountability was heightened, Dun tried to blend in the following ways:

1. They avoided making changes to their ratings, and when they did, they leaned more heavily on culturally-acceptable evaluation criteria.
2. They adjusted their data collection and information reporting procedures to boost their credibility.

By blending in, they tried to avoid anticipated audience challenges (e.g., media scrutiny, litigation) that threatened to erode market share and legal protection. In doing so, however, they sacrificed the quality of their reporting formats.

I use the social context of 19th century credit-rating in this study as the empirical setting in which I examine how public censure affects failure response, specifically risk appraisal. I examine these trends through the evaluative choices made by agents of the most prominent credit ratings firm of the time, R.G. Dun and Co. (now Dun and Bradstreet). This environmental change and the immediate reaction to it by agents at Dun represents a unique opportunity to study how sharp changes in the environment can affect the behavior and performance of expert organizations – institutional actors that provide a central role in the healthy functioning of mediated markets.

A Final Word on Experts

Exchange information is often incomplete and costly, creating severe information asymmetry problems and exchange inefficiencies (Stiglitz 2000). Evaluating firms in markets is a difficult problem for potential trade partners and investors, a process often fraught with uncertainty, due to the spatial and social distance between interested parties (Stiglitz 1985; Hertzels and Smith 1993). When partner or product appraisal becomes overwhelmingly difficult, potential trading partners often turn to experts for a helping hand – disinterested third parties such as

financial analysts (Zuckerman 1999), professional service firms (Salacuse 2000), and cultural critics (Hsu 2006), who produce specialized information and services to firms in strategic partner and product evaluation.

The use of these experts follows from their capacity to adapt more effectively to complex, unstructured decision-making environments and their ability to take advantage of geographic and experiential proximity to gather and process information (Shanteau and Stewart 1992; Spence and Brucks 1997). As their contribution grows and legitimacy is established, these experts often provide a more generalized intermediary function, supporting a wider community of stakeholders by creating and maintaining the integrity of a high volume of transactions (Vaaler and McNamera 2004; Langohr and Langhor 2008). At such a level, knowledge supplied by experts, such as analysts trading in equity markets (Kavajecz and Odders-White 2001); experts dealing in securities (Bihkchandani and Huang 1993); and credit-rating agents assessing the creditworthiness of entrepreneurs, firms, and their products (Carruthers and Cohen 2006; Ruef and Patterson 2009), is indispensable to the orderly functioning of markets.

A fundamental assumption inherent in this stakeholder-expert intermediary relationship is that the expert will employ its decision-making capabilities in a dependable, trustworthy fashion. That is, agents accepted as legitimate authorities are expected to maintain high-caliber decision making and avoid problems of carelessness, bias, and inattentiveness. However, careful research on mediated markets reveals accuracy problems and expert evaluations that, at times, fail to reflect the underlying quality of firms (Zuckerman 1999, Hsu 2006). Often, preferences and attitudes that expert analysts and agents carry with them adversely affect their evaluative ability (e.g., Carruthers and Cohen 2006); also, conflicts of interest are thought to compromise the integrity of the expert appraisal process (e.g., Michaely

and Womack 1999); and a dedication to ratings stability over accuracy is believed to limit the efficacy of evaluations (Watts 2003; Frost 2007).

Recent examples of such problems come to mind. In 2003, securities analysts on Wall Street were charged in major conflict-of-interest scandals, upsetting the web of investment activity supported by sell-side research. In 2007, the failure of agents at for-profit credit-rating agencies to properly assess the riskiness of complex financial instruments triggered a major subprime mortgage crisis. These developments were forceful reminders that the services of experts are critical to the healthy functioning of mediated markets and coordinated investment activity therein. Moreover, they served as catalysts for public criticism over the shortcomings of market experts. Media scrutiny following these developments has been especially severe in recent years, drawing attention to problems that have crept into the appraisal process (e.g., Klein 2004; Norris 2007; Wayne 2009).

While observers place varying importance on each of the factors affecting accuracy (Partnoy 1999; cf. Senate CRA Oversight Hearings 2006), concern from the investor community, business press, and federal government reveals a strong preference for overall sustained oversight and control over critical third party appraisal processes. In the wake of recent scandals and financial crises, various formal measures have been adopted or proposed to keep experts in check – motivating quality decision making and dampening the risk of carelessness, bias, and inattentiveness through the punitive cost of non-compliance. Performance and procedural compliance initiatives such as portions of the recent Sarbanes-Oxley Act of 2002 promise effective regulation of third party financial analysts and rating agents. Research suggests, however, that the effectiveness of informal control often rivals, even exceeds, such formal means of regulation (Benabou and Laroque 1992). Nevertheless, there is still much to learn regarding the effects of reputation on expert

decision-making. How do experts react to intense public scrutiny? That is, how do organizations react to evident failures in decision-making processes, and how does the public nature of this failure shape the nature of the response? In the current study, I show how accountability pressure may actually produce unwanted latent effects – ratings distortion that ultimately should provide a word of caution regarding public censure as an effective mechanism.

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