Embedding Values in Corporate Culture: Applying Schein's Organizational Theory to Lehman Brothers

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Abstract

Numerous questions were left unanswered when Lehman Brothers Holdings, Inc., the fourth-largest U.S. investment bank, sought Chapter 11 bankruptcy protection on September 15, 2008 and became the largest bankruptcy in U.S. history. This article examines two such questions: (1) How did its bellicose CEO, Richard Fuld, transmit his cultural values to Lehman staff; (2) did the accounting loophole, "Repo 105" or the firm's aggressive, high risk culture play the greater role in the firm's downfall. This paper draws on insights from Schein's (2010) organizational culture framework to explore these questions. We suggest that the intentional misuse of "Repo 105" was not the main contributor to the collapse, which was instead, in the context of the financial crisis, an almost inevitable product of the aggressive, risk embracing culture that its CEO both embodied and built. The use of the Schein framework allows for an analysis that focuses on the systematic rather than idiosyncratic aspects of Lehman culture that contributed to the failure. By providing fresh insights into the Lehman implosion, this study may be useful to managers and other stakeholders seeking to identify and mitigate similar negative cultural attributes.

Keywords: Organizational Theory, Firm Culture, Financial Crisis, Repo 105, Lehman Brothers

Introduction

This study examines the 2008 Lehman Brothers Holdings, Inc., (Lehman) bankruptcy within the broad organizational culture framework developed by Schein (1985, 1992, 2004, 2010). Schein's seminal work posits such a mutually dependent relationship between culture and leadership that neither can be fully operationalized without the other. Using the Schein framework allows for an analysis that focuses on the systematic rather than idiosyncratic aspects of the failure and is therefore useful for understanding the Lehman implosion and perhaps allowing firm managers and stakeholders to recognize and mitigate similar destructive cultural attributes. In addition, we suggest that the ability to use rules based accounting for complex transactions, in this instance "Repo 105," was not the main contributor to the collapse. The failure was instead an almost inescapable product of the culture that its CEO from 1994-2008, Richard Fuld had molded. At the point in 2007 when sale and repurchase transactions known as "Repo 105" began to significantly reduce Lehman's reported net leverage, the firm had already made choices that would almost inevitably lead to takeover, bailout, or bankruptcy.

On September 15, 2008, Lehman entered into Chapter 11 bankruptcy protection, a disastrous ending to its long history. Rising from its unassuming mercantile origins in Alabama, Lehman became the fourth largest U.S. investment bank and a major bond and stock underwriter. Finally and ultimately infamously, it was the predominant offerer of subprime-mortgage-backed securities in 2005 and 2006 just when the market began to wane. It was also heavily invested in commercial real estate and by the end of 2007 had over $100 billion in real estate related assets and securities, which was twice the 2006 year-end balance and over four times equity. Credit services and industry analysts began prodding investment banks to reduce their leverage ratios. Since it was unable to sell sufficient real estate assets because of the deteriorating market it instead manipulated its net leverage ratio by engaging in Repo 105 transactions. Lehman's high-risk strategy coupled with its high-leverage forced the firm to participate in the "shadow banking system," daily raising billions of dollars from non-bank financial intermediaries. Lehman's struggle to survive was undermined when many lenders in the short-term debt market lost confidence and either withdrew or charged bigger discounts. The SEC and NYFED both had employees on premises monitoring Lehman, but neither agency intervened and ultimately the U.S. government refused a bailout. Although other accounts of the Lehman collapse are both numerous and detailed, this study contributes to the organizational culture literature by focusing on the embedding and reinforcing mechanisms identified in Schein's theoretical framework to show how CEO Fuld built an organization without brakes or reverse gear. We conclude that Lehman's response to the mortgage crisis was similar to its previous reactions to external threats and that its most criticized tactic, Repo 105, is better explained as a leadership and culture debacle rather than an accounting failure.

The remainder of this paper is structured as follows. Section I briefly examines different perspectives on organizational culture and discusses those aspects of Schein's (2010) theoretical framework that describe how leaders effect cultural change. Section II analyzes the Lehman culture using the six mechanisms identified by Schein that leadership accesses to embed culture within organizations. Section III explicates the connection between Lehman's culture and its response to the sub-prime crisis. Section IV reports conclusions, limitations, and extensions.

1. Literature Review and Model of Cultural Embedding and Reinforcing Mechanisms

The term culture has been applied to a variety of phenomena, from a set of values that shape employees' beliefs and actions (Schein, 1985), to stories used to capture firm resources (Lounsbury & Glynn, 2001). Culture has also been examined at all levels of analysis, from individual cultural retooling to manage internal personal conflict (Molinsky, 2013), to the inculcation of socio-cultural values wherein it is viewed as a strategic resource that differentiates a firm in a competitive environment (Maurer et al., 2011). Although it may seem that the abundance of disparate theories would make it difficult to meaningfully disentangle the events at Lehman, the pioneering framework of Schein (1985, 1992, 2004 and 2010) effectively captures the relationship between organizational culture and leadership. In Schein's framework the relationship between these two variables are so mutually dependent that one alone cannot be explained without the other, by understanding Fuld's beliefs and norms and how he transmitted them to the Lehman staff, we better understand the causes of the failure.

1.1 Culture and Leadership

Schein (2010) adopts an instrumentalist view of culture, which is seen as:

> [A] pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and, feel in relation to these problems (Schein, 2010, p. 18).

While extensively discussing organizational culture, Schein (2010) makes its most important contribution by explicating how leaders create cultural change through the use of embedding and reinforcing mechanisms, in fact, to Schein, leaders are identified by their ability to do so. The relationship between leadership and culture using Schein's model has been examined for financial institutions by Sims (2000, 2009), Sims and Brinkman (2002, 2003), Dellaportas et al. (2007) and Kane (2015). Sims (2000) and Sims and Brinkmann (2002) examined the case of Salomon Brothers and the roles played by Warren Buffet and John Gutfreund, the CEOs of the investment banking division. Sims and Brinkmann (2002) focused on Gutfreund's capricious leadership style which "led to a culture that was tailor-made for greedy and power-hungry employees whose commitment to ethical behavior was suspect" (Sims and Brinkmann 2002, p. 330). The authors consider Schein's culture embedding and reinforcing mechanisms concluding that Gutfreund's leadership failed Salomon Brothers. Sims (2000) relies on Schein's mechanisms to describe how Gutfreund's replacement, Buffett, successfully changed the organizational culture. Sims (2000) concludes that the steps Buffet implemented to rebuild Salomon's ethical culture reflect Schein's mechanisms. Sims and Brinkmann (2003) used a similar lens to examine the Enron failure. Schein's culture embedding mechanisms provide the explanatory narrative of how the unethical leadership of Enron's top executives, Jeffrey Skilling, Kenneth Lay, and Andrew Fastow, created an organizational culture that destroyed the company. The authors conclude that "[I]n retrospect, the leadership of Enron almost certainly dictated the company's outcome through their own actions by providing perfect conditions for unethical behavior" (Sims and Brinkmann 2003, p. 250). They, too, find evidence supporting the validity of Schein's framework. Dellaportas et al. (2007) studied the organizational culture within the National Australia Bank (NAB) during 1998 to 2003 in which four dishonest traders perpetrated and concealed losses of AUD$360 million. They used Schein's framework to analyze the relationship between NAB's culture and the traders' behavior. The authors found evidence supporting the impact of all of Schein's mechanisms except for resource allocation. Sims (2009) examines companies that engaged in rebuilding reputations including Adelphia, Boeing, Citigroup, and Computer Associates, using an integration of Schein's leadership mechanisms with a theory of social drama. Recently, Kane (2015) applied Schein's framework to financial institutions and to their relationship with government agencies exploring organizational culture that encourages firms' imprudent risky behaviors. In this article, we extend the literature on the Lehman implosion by examining the relationship between leadership and culture using Schein's organizational theory model. Prior research that applied Schein's model to financial firms did not do any in-depth analysis of how accounting rules are used in an organizational context. The present article extends prior research by describing how Repo 105, which contributed to the firm's demise was an artifact of Lehman's corporate culture.

2. Cultural Embedding and Reinforcing Mechanisms at Lehman

This section examines Fuld's effect on Lehman's culture using Schein's six mechanisms that allow culture to be created, maintained and altered by leaders as the method of analysis. Schein (2010), while extensively discussing organizational culture, makes its most important contribution by explicating how leaders create cultural change, in fact, to Schein, leaders are identified by their ability to do so. While it is necessary to provide a brief summary of Schein's view of culture, the focus of this section is on the mechanisms that allow culture to be created, maintained and altered by leaders.

Schein analyzes organizational culture based on three levels; artifacts, espoused beliefs and values and basic underlying assumptions. Artifacts are what an observer would see and hear when studying a group and could include behaviors and elements of organizational climate that are manifested in verbal expression and manners of speech, technology and office design and furniture. Artifacts can be readily observed but their meaning is often "difficult to decipher"

(Schein, 2010, p. 24), so researchers must also study beliefs and values. Espoused beliefs and values represent the claimed values of the organizations as articulated by its members. Values and beliefs are first espoused by leadership, but become shared by the group when their denouement brings organizational success. Values and beliefs profess what is good or bad and what actions attain the good and prevent the bad. There may be disconnect between articulated values and beliefs and those invoking the everyday actions of the organization's constituents. When analyzing values and beliefs it may be difficult to distinguish between "those that are part of the [actual] ideology or philosophy of the organization, and those that are rationalizations or only aspirations for the future." (Schein, 2010, p. 27)

Artifacts and espoused beliefs and values are the observable manifestations of basic assumptions that form the deepest level of a culture. To understand an organization's culture, we must probe beyond artifacts and espoused beliefs and values. "Some of the most important and most invisible elements of an organizational culture are the shared basic assumptions about 'how things should be done, how the mission is to be achieved, and how goals are to be met." (Schein, 2010, p. 80) There are six culture embedding and reinforcing mechanisms that determine an organization's culture: (1) deliberate role modeling, teaching, and coaching; (2) how leaders recruit, select, promote, and excommunicate; (3) how leaders allocate rewards and status; (4) how leaders allocate resources; (5) how leaders react to critical incidents and organizational crises; (6) what leaders pay attention to, measure, and control on a regular basis. (Schein, 2010) Leaders apply the six mechanisms continuously which reinforce and encourages both behavior and adoption of espoused values and beliefs. By applying the mechanisms, leaders are responsible for cultural successes and failures. These mechanisms operate simultaneously. Our first research question examines how the six embedding mechanisms were used by Fuld to create a culture that led to Lehman's implosion:

> **RQ1**: Did CEO Fuld effectively use the Schein embedding mechanisms to create a culture that mirrored his own values?

2.1 Deliberate Role Modeling, Teaching, and Coaching

Schein considers this mechanism to be the defining mark of leadership. It can be argued that role modeling, teaching, and coaching is the foundation mechanism for imprinting culture on an organization, since it does not rely on formal authority to be effective. Fuld's mentoring and role modeling had much in common with such notoriously bad tempered contemporaries as Joseph Nacchio of Qwest and "Chainsaw Al" Dunlap of Sunbeam, in fact, Fuld was known for much of his career as "The Gorilla." In each instance, modeling of angry responses to failure created organizational cultures in which supervisors learned to use anger as a management tool and reporting failure was simply unacceptable. There are numerous examples of Fuld's negative coaching style in the press. An article about various CEO's bullying behavior in the Financial Times stated:

> [Fuld] was, in the words of one well-placed former colleague, "almost unbearably intense". He did not have to bully people. Senior managers knew what was wanted and what would happen if they didn't perform. He certainly got everyone's attention when he made his feelings known. At a conference for Lehman's managing directors in London last spring, he declared: "When I find a short seller [Lehman's stock was under attack], I want to tear his heart out and eat it before his eyes while he's still alive." For some reason, senior colleagues were reluctant to bring Mr. Fuld bad news - until it was too late." (Stern, 2009, p.14) (Quotation marks and brackets in original.)

This is an example of how well Fuld transmitted his values, beliefs, and expectations through explicit declarations. His "teaching/coaching" style was particularly violent and graphic and imparted a culture where colleagues kept silent when they should have been alerting him to the serious issues that led to the firm's demise.

Publicly, Fuld modeled being a driven team-player, but within Lehman he was remote and intolerant of multiple viewpoints. He typically arrived at his 31st floor office via a limousine, back-door entrance and private elevator, displaying a reluctance to greet or acknowledge staff. His near complete absence from the trading floor was also at variance with the team-player image that he cultivated externally. His behavior appeared to espouse a strictly hierarchical culture in which leaders did not mingle with the troops. This ensured that top management would not be aware of immediate problems that the firm faced.

Anecdotes abound about CEO's angry outbursts when employees answer their questions with "bad news". According to Gasparino (2009), Fuld went beyond that when he reacted strongly to a subordinates inquiry: "A question from the floor at an employee town-hall meeting about Lehman's troubled balance sheet caused Mr. Fuld to exclaim: "You deserve to have your legs cut off!" (Gasparino, 2009). This violent manner of speech illustrates a pattern of Fuld's use of negative coaching.

Fuld's decisions were known to be made autocratically. He effectively vetoed a unanimous decision of Lehman's executive committee that established casual dress Fridays. To make his displeasure known he showed up to an annual meeting rehearsal in a suit on a Saturday, while his colleagues were wearing casual clothing. He had decided that in order to compete with its rivals, Lehman had to adhere to the button down dress code traditional for investment bankers (Craig, 2004) Fuld's role modeling had effects that permeated the organization as managers used intimidation as a tool and their subordinates learned that conformity and silence was rewarded. This paved the way for staff who were leery of continuing to use Repo 105 to still obey orders without question, the effects of which are discussed in the Crisis, Culture and Accounting section below.

2.2 How Leaders Recruit, Select, Promote, and Excommunicate

Contradictions also existed between the values nominally espoused by Fuld for human resource management and those that he encouraged and were experienced as everyday aspects of firm culture. Fuld emphasized recruiting varsity team sports players, but he himself had played squash, an intensely individual sport and one noted for crushing losers. The managers Fuld picked for the executive committee were those who had best used team support for personal aggrandizement. An apt example was Lehman's CFO from December 2007 to July 2008, Erin Callan. Ms. Callan had been a tennis player and a gymnast, two primarily individual sports. While in her memoir (Callan, 2016) she recounts difficulties in becoming a team player, a closer reading reveals that mastering the subtleties of pursuing individual goals while appearing to be team oriented was the real challenge. Callan was not given much time to grow into her role as CFO and was fired after only six months. Stein (2013) characterizes her and President Joe Gregory's firing: "Fuld acted autocratically and brutally…" Fuld also dismissed Madelyn Antoncic, Chief Risk Officer, who Fuld had regularly told to "shut up" when she brought up concerns about deals and was regularly thrown out of meetings. (McDonald, 2009 p. 268) McDonald states that:

> Through the years Fuld had fired many, many people, for a thousand different reasons. Popular local intelligence, however, suggested that the most prevalent way of incurring his rank displeasure was to be so clever that you threatened his power base. (McDonald, 2009, p.90)

This persistent pattern of firing employees because they were "clever" sent another clear message to subordinates not to question the CEO's strategies including the use of Repo 105.

2.3 How Leaders Allocate Rewards and Status

According to Schein (2010) rewards and punishments carry messages to members of the organization about the leader's values and underlying assumptions. Fuld created a formal system for rewarding teamwork based on one he had previously developed for his hockey player son; the boy was rewarded either in cash or Lehman stock, with assists being worth more than goals. (Sorkin, 2010) Managers received similar base salaries but their bonuses were determined by team performance. Fuld did encourage goal alignment by fostering an increase in employee stock ownership from 4% in 1994 to 33% by 2008. However, as with Enron's infamous "rank and yank" the salient internal message was that the best rewards were subjectively determined and went to the favored managers of high-risk, high-return businesses. According to the Report of the Bankruptcy Examiner, Valukas (2010):

> In practice, Lehman rewarded its employees based upon revenue with minimal attention to risk factors in setting compensation". "In theory, therefore, traders and business units were incented to enter into transactions for short-term profits, even if those transactions created long-term risks for the firm" (Valukas, Vol. 1, p. 162).

This misalignment may have caused employees to continue, even as bankruptcy loomed, to focus on annual bonus-oriented decision-making rather than the long-term problem solving that their substantial equity stake should have induced.

2.4 How Leaders Allocate Resources

Resource allocation is a powerful means to imbue an organizational culture with the leader's values. Budgets communicate priorities and actual investments define the organization. Fuld's response to the dot.com collapse and 9/11 was to riskily increase financial commitments and to plunge into the sub-prime market while diverting resources away from the bond operation that had defined Lehman. As the housing bubble reached its maximum and warning signs emerged, Fuld made sure that the mortgage unit was well funded and also countenanced the expansion into real estate, about as illiquid an investment as exists. The message sent to the firm by the resources provided to these businesses was clear. According to McDonald (2009), the mortgage and property staff got "whatever they needed-extra budget, permissions for more risk, permission to invest colossal hunks of the firm's capital in their market-they got." (McDonald, 2009) This practice continued through the first two quarters of 2007 as according to Valukas (2010), "Commercial real estate investments, leveraged loans and other principal investments consumed more capital, entailed more risk, and were less liquid than Lehman's traditional lines of business." (Valukas, Vol. 1, p. 62)

2.5 How Leaders React to Critical Incidents and Organizational Crises

According to Schein (2010), leader's reaction to crisis reveals important underlying assumptions to subordinates. Crisis also provides the opportunity to create new organizational values and work flow processes. Crises invoke heightened anxiety and emotional involvement among employees, who endeavor to lessen anxiety by interpreting signals from leaders. Employee's emotional involvement triggers engagement, which results in them modeling behaviors that they witness in the leadership. They are likely to draw on these learned behaviors to cope with future challenges.

Lehman's last ten years were marked by several major crises, which were survived by aggressive responses from Fuld. In 1998, world financial markets were stressed by Russia's moratorium on foreign debt repayment and the near collapse of a large hedge fund. Lehman was solvent but rumors began to spread that it was on the verge of bankruptcy. It became an acquisition target and was approached by several financial institutions, including Deutsche Bank AG. In an executive committee meeting, CFO John Cecil, made the pragmatic suggestion expected of an officer charged with financial stewardship. He stated that the firm needed "to consider that we may need to merge with someone else to get more capital," Fuld brusquely cut him off and replied, "This is going to be a short discussion because this firm is not for sale." (Craig, 2004) Lehman emerged intact by expansion into new innovative business sectors such as telecommunications and technology. When the Internet bubble burst in 2000, Fuld faced another crisis because these two sectors had proved to be integral to Lehman's success strategy. Fuld refused to cut staff costs just as his turnaround was taking hold. In contrast to rivals Goldman Sachs and Morgan Stanley who slashed jobs by more than 10%, he spurred an overall Lehman job expansion, which totaled a 9% increase by 2002. The worst crisis arrived on September 11, 2001 when the Lehman offices across from the World Trade Center became uninhabitable. Fuld moved the firm to a midtown hotel, quickly converting bedroom suites into offices. He then seized an opportunity to buy an unoccupied midtown building from competitor Morgan Stanley. Even as the Wall Street community panicked, Fuld was able to rally his staff to resume normal operations. So what would Lehman's traders and managers have internalized from these three near mythic episodes? Perhaps that crisis is survived by aggressive response, more mixed martial arts than tai chi.

Fuld's antagonistic behavior persisted throughout the last crisis and affected perceptions and perhaps actions within and without the firm, an article in the June 14, 2008 *Financial Times* stated:

> He [Fuld] has carried that bristling intensity into Wall Street, where it is so legendary rivals, only half-jokingly, say they would fear for their safety if they were to cross him. "People stopped doing business with Bear [Stearns] at the end", said one executive. "I don't think they would do that with Lehman because they wouldn't want Dick to come crashing through the window to rip their arms off." (White 2008)

2.6 What Leaders Pay Attention to, Measure, and Control on a Regular Basis

Schein (2010) asserts that the most powerful tool that leaders possess to espouse their beliefs and values is what they systematically pay attention to, measure and control. When a leader routinely asks questions about an issue, subordinates focus their time and attention on that issue. However, a visible emotional reaction can be an even more powerful signal.

As early as May 2007 Fuld became concerned with Lehman's mortgage exposure and instructed the new Head of Fixed Income Division, Roger Nagioff, to reduce leveraged loans. By January 2008 Fuld had crystallized his qualms about the economy and housing market and was intent on reducing net leverage and the overall balance sheet. He appointed Bart McDade, Head of Global Equities, "Balance-Sheet Czar" and instructed him to manage Lehman's net balance sheet and net leverage ratio (Valukas, Vol. 3, p.805, 809). That adherence to Fuld's directives would permeate the organization was a certainty given his notorious temper, clearly, if Fuld was focused on net leverage, Lehman was, as well.

In the role of “Balance-Sheet Czar”, McDade was charged with the task of creating a Daily Balance Sheet and Disclosure Scorecard report to monitor and control the firm’s leverage and communicate that information on a daily basis. According to the Examiner’s Report, “The Daily Scorecard was widely disseminated among senior Lehman management from April through September 2008 and routinely contained references to the impact Repo 105 transactions had on Lehman’s daily balance sheet” (Valukas, Vol. 3, p. 811). Further, Fuld directed Gregory and McDade to meet with Lehman division heads to discuss and review balance sheet targets and then report back to him on firm progress (Valukas, Vol. 3 p. 817).

2.7 Evaluating Fuld’s Transmission of Culture

In reviewing Fuld’s transmission of culture certain commonalities emerge. He ostensibly espoused teamwork and mutual respect, but the values with which he imbued Lehman sent the staff a different and quite consistent message: (1) The behaviors he modeled and effectively coached, included anger, capriciousness, inflexibility, and self-promotion; (2) his human resource practices allowed him to create an executive committee that traded agreement with the boss for bonuses; (3) he allocated rewards and status to risk takers who were both egotistical and sycophants; (4) he provided resources to those projects and managers who promised high rewards while ignoring risk; (5) he had victoriously led Lehman through previous crises by making risky, aggressive choices; (6) consequently, whatever Fuld paid attention to, the entire firm pivoted towards. Whether in what he paid attention to, how he responded to crisis, allocated resources, or hired and promoted, roll-the-dice behavior was approved and rewarded. We answer the first research question in the affirmative, Fuld effectively used the cultural embedding mechanisms identified by Schein (2010) to create a culture that reflected his own values.

3. Lehman’s Culture and Its Response to the Sub-Prime Crisis

This section examines Lehman’s path to collapse as it employed Repo 105 as its last opportunity to undertake a risky response to crisis rather than acknowledge and resolve problems. Was the bankruptcy due primarily to culture or did the availability of Repo 105 create a path to disaster than otherwise might have been avoided? The second research question addresses this issue:

> **RQ2:** Was the Lehman culture or its accounting practices the more significant contributor to its demise?

3.1 Culture, Crisis, and Accounting

In 2006, Lehman significantly increased its investments in higher-risk, less liquid investments to support aggressive revenue growth goals despite the housing market decline and the emerging subprime mortgage crisis (Valukas, Vol. 1, p. 59). In doing so, the firm positioned itself for higher returns but also increased its balance sheet risks. This moved them away from a lower-risk brokerage model and towards one where proprietary investments placed capital at risk for longer periods. Lehman was left holding a larger proportion of riskier illiquid assets that would be difficult to exit if the market downturn continued (Valukas, Vol. 1, p.43, 62).

Investment bank balance sheets drew increased attention from credit ratings agencies and lenders as the subprime crisis magnified throughout 2007. Regulators were slow to react and as reported by Mahoney et al. (2015) the SEC had few staffers assigned to examine risky investments in mortgage related securities. Pressure to reduce leverage escalated and concerns were particularly acute in the short-term debt markets. As a result, borrowers faced the strong prospect of creditor-imposed risk mitigants such as additional collateral requirements, higher funding charges or termination of lending relationships (Valukas, Vol. 3, p. 735, 817, 822).

Like other investment banks, Lehman's balance sheet was highly leveraged, short-funded and significantly reliant on overnight borrowings. This left Lehman's ability to fund its operations dependent on the daily decisions of overnight lenders to extend it credit. Lehman could not easily reduce its leverage by selling its increasingly dubious securities inventory. Given the magnitude of asset sales that would have been required and the transparency of over-the-counter fixed income markets, participants would likely have become quickly aware of Lehman's trouble (Valukas, Vol. 3, p. 827). But Lehman was also reluctant to deleverage via an equity issuance due to the potential negative market impressions that doing so would also engender (Valukas, Vol. 1, p. 152). Constrained in its ability to de-lever through traditional approaches, Lehman utilized its Repo 105 repurchase agreement structure to temporarily reduce reported assets and leverage on quarter-end filing dates. While this tactic ameliorated negative perceptions, it accomplished nothing in terms of actual deleveraging and incurred real transaction costs. The financial statements issued by Lehman from fourth quarter 2007 through second quarter 2008 reflected the sale of nearly $50 billion in financial assets and a concomitant decrease in liabilities (Valukas, Vol. 1, p. 18.). In actuality, it was merely window dressing and a stop-gap, a reality well known within Lehman, as evidenced by the email examples included in Table 1. The comments made by Callan, McDade, Garvey and others, are just samples of the damning emails contained in the Examiner's Report, which show that Lehman's inner circle were not deceived and that they had no miraculous exit strategy. They were merely buying time in the hope that an unforeseen event would prevent disaster and likely, to avoid Fuld's wrath. These exchanges provide evidence to support RQ2; the use of Repo 105 was a symptom of Fuld's leadership attributes. Lehman's inner circle executives were too cowed by Fuld to propose realistic workable strategies that might have saved the firm.

Table 1: Abstracts from Emails Regarding the Use of Repo 105

September 11, 2007-Ryan Traversari, Senior Vice President for External Reporting: [The]"question" of net leverage ratio "has come up multiple times in the 20 seconds that I've been here largely from [then CFO] O'Meara, Freidheim, Lowitt, Corporate Strategy, Investor Relations and the like. Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%201695576.pdf
January 30, 2008-Michael McGarvey Senior VP Finance Controller Fixed Income Division: Although it's an approved policy it's regarded by many around here as B/S window dressing (including me). By the way we are the only large firm on the street that uses Repo 105 Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%203379145.pdf
April 3, 2008- Bart McDade, [Head of Equities and last President and COO]: I am very aware it is another drug we r on. Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%201570783.pdf
April 17, 2008 - Thomas Siegmund, Head of Asia Pacific Liquid Markets: I might need your help on this. As B/S will be super tight, I need to make sure we make best use of 105: I want to investigate, whether 105-mechanics can apply to Aussie paper. An answer like below: "no..will explain when back from vac" is unacceptable in any circumstance and really out of line in the current situation! Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%20739685.pdf
April 17, 2008- Marie Steward, Global Head of Accounting Policy: You cannot do Repo 105 in Australia. We will not approve it even if it technically works. I will explain further when I am back from vacation on 22nd. Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%20739685.pdf
May 13, 2008-CFO Callan email to Gregory Meeting with several people of Fidelity today as follow up to yesterday's conference. They have a good sense of the dynamics for the quarter. They gave some good feedback that we may get a very short leash if we show up with a rough quarter if we do not get the balance sheet exercise completed. No matter what,

the skeptics are focused on our balance sheet and that is the key to the future and the valuation. That becomes more important (as we know) if the quarter's revenue performance is worse. I know we are saying it over and over but we HAVE to deliver on the balance sheet reduction this quarter and cannot give any room to FID for slippage. Retrieved from http://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBHI_SEC07940_034732.pdf

September 12, 2008-[Bankruptcy minus 3 days] Gerard Reilly, Global Product Controller:
Please take out repo 105 header all reference to it asap Thanks
Reply from Michael McGarvey: All Repo 105 has been removed. Retrieved from https://web.stanford.edu/~jbulow/Lehmandocs/docs/DEBTORS/LBEX-DOCID%20641537.PDF

3.2 Sham Sales, Repurchase Agreements and Repo 105

Legitimate repurchase agreements are short-term funding instruments used extensively by broker-dealers to finance securities inventory. Typical repo counterparties are institutional managers such as money market mutual funds and securities lenders. Short-term repos are considered safe investments and are commonly secured by liquid high-quality collateral such as U.S. Treasuries and mortgage-backed securities issued by government-sponsored entities. Over-collateralization at 102% is common. Collateral protects the lender against the risk that the cash borrower does not repurchase the securities and the extra 2% “haircut” protects against declines in collateral value should the cash lender need to liquidate the collateral (Baklanova 2015, p.19). Conventional repos are typically reported as short-term borrowings and could, in 2008, rarely be accounted for as sales. But, as stated in SFAS 140, paragraph 218, if the value of the sold/pledged assets exceeded 102% of the proceeds, *effective control* was not maintained and the transaction was treated as a sale (FASB 2000). For example, if I take $100 from you and give you my bike worth $102 to hold until I pay you back, it’s a secured loan. If instead I offer you my other bike worth $105, it’s a sale because if you keep the bike, the cash I borrowed will not allow me to purchase a similar bike.

Lehman’s Repo 105 structure provided for a deliberate over-collateralization of 105%, as per the example, that created a compliance rationale for treating repo borrowings as inventory sales. Effectively, by providing *more* collateral than a lender might have demanded, Lehman was able to convert the lender to a buyer and the loan into a sale. The resulting “sale treatment” is described in Lehman’s Accounting Policy Review, referring directly to SFAS 140. It should be noted that the Accounting Policy Manual indicated transactions were typically transacted by the firm’s European entity because, “Repos generally cannot be treated as sales in the United States because lawyers cannot provide a true sale opinion under U.S. law.” (Lehman Brothers Holdings, Inc., 2006). The true sale opinion is an important transaction underpinning without which Lehman’s auditors, Ernst and Young, could not have accepted the sale treatment.

Repo 105 provided Lehman with a temporary accounting solution for reducing quarter-end *reported* leverage. At inception, “sold” securities were removed from its balance sheet and the cash receipts were used to satisfy unrelated liabilities. This reduced assets, liabilities and leverage, but only through the repo maturity date which was often just a few days beyond quarter-end. On the maturity date, new funds were borrowed to repay Repo 105 lenders and previously “sold” securities (returned collateral) were brought back onto to Lehman’s balance sheet (Valukas, Vol. 3, p.734). The net effect was a form of round-trip accounting which released leverage before quarter-end and restored it afterwards. It is significant that the Repo 105 re-characterization process required the intervention of a manual journal entry, as Lehman’s system automatically treated all repos as borrowings (Valukas, Vol. 3, p.798). Lehman’s Repo 105 usage accelerated 30.5% in the first half of 2008 increasing from $38.6 billion at Q4 2007 to $50.38 billion by Q2 2008. This reduced its reported net leverage by as much as 13% during this period (Valukas, Vol. 3, p. 748).

The most direct cause of Lehman's bankruptcy was its lack of access to short-term funding. Its significant reliance on overnight repo borrowings presented it with a large daily refinancing requirement. Complicating matters, Lehman's repo lender group was not diversified but rather was significantly concentrated among a small group of lenders. These combined dynamics dramatically increased Lehman's refinancing exposure. It left the firm vulnerable to decreased lender confidence, increased haircuts and systemic market panic. As the financial crisis deepened in the summer of 2008, Lehman's position became increasingly precarious. Of its $600 billion in liabilities, one-third were overnight, 80% of that came from 10 lenders and its equity was only $26 billion. Between selling assets at deep losses and increasingly steep charges on repos, Lehman ran out of cash (Wiggins et al. 2014 p. 8,16).

3.3 Culture not Accounting

The foregoing analysis provides an affirmative answer to the second research question which asked whether Lehman's leadership and culture or its accounting practices were the more significant contributor to its demise. Fuld and the culture he built at Lehman all but assured bankruptcy in an economy in which only a conservative strategy could prevail. Had Repo 105 not been available, other accounting ploys might have been used. Perhaps Lehman would have followed other notorious firms and crossed the line from dubious accounting to accounting fraud. Or, Lehman may have simply embarked on even more risky bets, in the hope that real returns would build capital and allow for reducing leverage. Had it done so in 2008, the collapse would have almost certainly been even more devastating.

4. Conclusions, Limitations, Contribution and Extensions

4.1 Conclusion

Our use of the Schein framework has yielded an analysis that focuses on the systematic aspects of the Lehman failure perhaps allowing firm managers and stakeholders to recognize and mitigate similar destructive cultural attributes. Although much has been written in the financial and popular press, as well as in the Examiner's Report concerning the role played by Repo 105, Lehman was doomed by its high risk reflexive response to the incipient decline in the sub-prime market and its refusal to retreat or pivot as the crisis worsened. The analysis of the cultural embedding and reinforcing mechanisms provides persuasive evidence that Richard Fuld's values and beliefs and his success in injecting them into the Lehman culture were the prime causes of Lehman's earlier successes and eventual failure. Consistent with Schein's (2010) view of culture and leadership Fuld's hand-picked subordinates devised an aggressive, and one might conclude pointless, solution to Lehman's involvement in the sub-prime quagmire. Truly transparent financial reporting might have actually hastened a precipitating event, but the result could have been a softer landing with better outcomes for creditors, employees, and perhaps shareholders. It is clear that a soft landing was not desired; Lehman's prior crises had been successfully surmounted by risky responses that were both a product and reinforcement of its culture. The revelatory email exchanges, sampled in Table 1, depict an upper echelon that was fully committed to the double-down, no retreat, culture that Fuld both embodied and created. Rather than being an effective brake on folly, the Chief Risk Officer was subject to harassment in front of her peers. Our findings are consistent with Sims and Brinkman (2003) who found that Enron's collapse was likewise more a matter of a toxic and inevitably self-destructive culture in which its far more outrageous accounting was also more symptom than root cause.

Although Lehman's Board, composed of insiders and passive place-holders, could not alter Lehman's trajectory, other boards may be inclined to take a more proactive role and potentially avoid such disasters. But the conclusions from this study provide insight into the imbuing of culture, not the ill effects of too much risk. In fact, organizational failures can just as well be engendered by a passive culture, or no cohesive culture at all. In addition to taking an active role in choosing organizational values, boards might require regular review of the efficacy of culture imbuement using Schein's mechanisms as a reporting framework. By reviewing how leadership is using specific embedding and reinforcing mechanisms to transmit culture and by assessing whether the espoused and actual values match, boards may be able to effectively monitor firm culture as they do operating, investing and financing decisions.

4.2 Limitations

A limitation of our research is that it is dependent on the historical information amassed by others for their own purpose. The present research is particularly hampered by the paucity of contemporaneous explanations for the actions of Lehman's managers. In order to convincingly corroborate the claim that Richard Fuld, molded the Lehman culture to reflect his own values and that by doing so caused Lehman's failure, it would be helpful to know how managers rationalized their actions at the point at which they occurred. Instead, we are in possession of a vast archive of testimony and memoir from after the bankruptcy. While the evidence is suggestive that Fuld created a high risk, no retreat culture and that his subordinate's actions reflected these internalized values, other possibilities exist, such as simple greed for short-term rewards. We can read manager's emails and infer motivations, but mostly have to rely on post hoc, often self-serving, rationales for their behaviors. As such, the portrait of Fuld as a near monomaniacal "gorilla" may be a convenient excuse for the bad and foolish behavior of his subordinates and our findings, while suggestive are not conclusive.

4.3 Contribution and Extensions

This study adds to the organizational culture literature by examining how the much criticized culture at Lehman was created and sustained. It is the first to apply Schein's model to a major participant in the 2008 financial crisis, thereby adding to knowledge about the cultural influencers of that catastrophic event. In doing so it clarifies that accounting ploys played only a limited role in Lehman's demise.

The current investigation has provided a deeper understanding of how an aggressive, risk loving CEO created a culture mirroring his own traits, which perhaps inevitably led to failure during a systemic catastrophe in which hedging and pivoting were needed for survival. Future research should seek to examine the cultural transmission mechanisms used by all of the large investment banks that both caused and were affected by the 2008 meltdown. Did Bear Stearns and Lehman fail and Morgan Stanley and Goldman Sachs survive due to culture, luck, or the capriciousness of government intervention? Our answer for Lehman is culture, a cross sectional, multi-firm analysis might reinforce this conclusion or suggest other answers. A comprehensive analysis of the role of firm culture during the 2008 financial crisis could also consider how culture affected the behavior of counter-parties and regulators.

Lastly, future investigations that use the Schein framework to study instances of organizational failure where crimes are known or suspected could be informed by the criminology literature that focuses on deviant subcultures such as differential association theory (Sutherland 1949). That literature examines the mechanisms by which criminal behavior is learned in groups or organizations that possess values and norms in conflict with that of the broader society in which they are embedded. An integration of the organizational culture and cultural deviance literatures should be a fruitful avenue for future research.

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