Lehman's $hell Game

POOR RISK MANAGEMENT

By Saurav K. Dutta, CMA;
Dennis Caplan, CMA, CPA; and
Raef Lawson, CMA, CPA, CFA

For fiscal 2007, Lehman Brothers reported record income in excess of $4 billion on revenue of more than $60 billion. In early 2008, its stock was trading in the mid-$60s, yielding a market capitalization of more than $30 billion. Over the next eight months the stock tumbled, losing 95% of its value. It was trading around $4 by September 12, 2008. Three days later, Lehman filed for bankruptcy protection, becoming the largest U.S. company to fail. In March 2010, the Report of the Bankruptcy Examiner outlined the reasons for Lehman's failure and described how the firm's deteriorating financial position led to aggressive and allegedly misleading financial reporting practices. We'll examine some of those practices and provide insight regarding challenges to corporate governance that firms face during times of financial distress.

Business Strategy and Induced Risks

In 2006, Lehman made a deliberate business decision to pursue a higher-growth business strategy. To do so, it switched from a low-risk brokerage model to a high-risk, capital-intensive banking model. Prior to 2006, Lehman would acquire assets primarily to "move" them to third parties, but starting in 2006, it acquired assets to "store" them as its own investments, hence internalizing the risk and returns of those investments. The mismatch between short-term debt and long-term, illiquid investments required Lehman to continuously roll over its debt, creating significant business risk. Lehman borrowed hundreds of billions of dollars on a daily basis. Since market confidence in a company's viability and debt-servicing ability is critical for it to access funds of this magnitude, it was imperative for Lehman to maintain good credit ratings.

According to the Examiner's Report, Lehman was pursuing an aggressive 13% growth rate in revenues. To support this growth, the company was targeting an even faster (15%) increase in its balance sheet and total capital base. In late 2007, the company held assets of $700 billion on equity of $25 billion with $675 billion of liabilities, most of which was short term.

Lehman's new strategy increased its business risk because its investments in long-term assets—commercial real estate, private equity, and leveraged loans—had more uncertain prospects and were less liquid than its traditional investments. As the subprime crisis unfolded, the company doubled its holdings in illiquid investments from $87 billion in 2006 to $175 billion at the end of the first quarter of 2008. Lehman couldn't use these assets to generate cash on short notice or as collateral to borrow funds. Most lenders are wary of accepting illiquid assets as collateral because it increases their risk should the borrower default on the loan. Also, there was no appropriate way to hedge investment in these assets because their valuation was uncertain. This further increased the risk of potentially large losses should these assets lose value.

As economic conditions worsened and markets declined in 2007 and 2008, Lehman slid further into financial distress and had to reduce its exposure and leverage. The more highly leveraged a company is, the more important it is for the company to act quickly when market conditions turn against it. But because of the nature of its holdings, Lehman had difficulty selling its illiquid assets so was unable to reduce its leverage rapidly through typical means. Lehman could only offload its assets at a steep loss that would negatively impact the company in two ways. First, recognizing losses on the sale of these assets would reduce equity. Second, the market's negative perception of the quality of Lehman's remaining assets would make it more difficult for Lehman to borrow. In response to the crisis, Lehman attempted to paint a rosy—but misleading—picture of its financial health by employing an accounting trick the company called "Repo 105" and "Repo 108."

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Repo 105 and 108 Transactions

Financial institutions commonly use sale and repurchase agreements ("repos") to finance their security position by transferring securities as collateral for short-term borrowings of cash. The transaction is completed in two phases. The borrower receives cash and transfers security inventory to the lender. Subsequently, the company repays the borrowed amount with interest and repossesses the securities. The security amount transferred as collateral slightly exceeds the amount borrowed by around 2%; this excess is called the "haircut."

These short-term financing transactions use a payable account credited at the inception of the borrowing and debited upon loan repayment. For example, if a company receives $100 million cash and transfers $102 million of securities as collateral, the journal entry would be as follows:

Cash	$100M	
Short-term Payable		$100M

On the balance sheet, the securities transferred as collateral continue to be included as assets, and footnote disclosure would show the total amount of securities being held by third parties as collateral. At a later date, when the short-term borrowing is repaid with interest, the journal entry would be:

Short-term Payable	$100.0M	
Interest Expense	$0.2M*	
Cash		$100.2M

(*Assuming the interest accrued was $0.2M)

Lehman created a new type of repurchase agreement. While a typical haircut was about 2% for the period under discussion, Lehman took haircuts of 5% for fixed income securities and 8% for equity securities, hence the terminology Repo 105 and Repo 108. For example, if Lehman borrowed $100 million, the company would transfer either $105 million of fixed income securities or $108 million of equity securities to the lender. By taking this larger haircut, Lehman characterized these transactions as sales of securities in accordance with its interpretation of paragraph 218 of Statement of Financial Accounting Standards (SFAS) No. 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." Lehman recorded the difference between the value of the securities transferred and the cash received as an option to repurchase on a specified date. A typical journal entry would be as follows:

Cash	$100M	
Future Option to Repurchase	$5M	
Investment Securities		$105M

No liability was recorded when cash was received. Instead, the Investment Securities account (an asset account) was credited. Additionally, since the difference between the amount of securities transferred and cash received was allocated to an asset account, no gain or loss was recorded on the sale of the securities. Structuring a transaction as a Repo 105 left total assets, total liabilities, equity, and income unchanged at the time of the initial borrowing. This accounting treatment contrasts with an ordinary repo transaction, which increases both assets and liabilities.

As a separate transaction, Lehman would use the cash it borrowed to "pay down" other liabilities, reducing both assets and liabilities. At a later date, when the cash is paid back and the securities "repurchased," the journal entry to record the repurchase would be:

Investment Securities	$105.0M	
Interest Expense	$0.2M*	
Cash		$100.2M
Future Option to Repurchase (A)		$5.0M

(*Assuming the interest accrued was $0.20M)

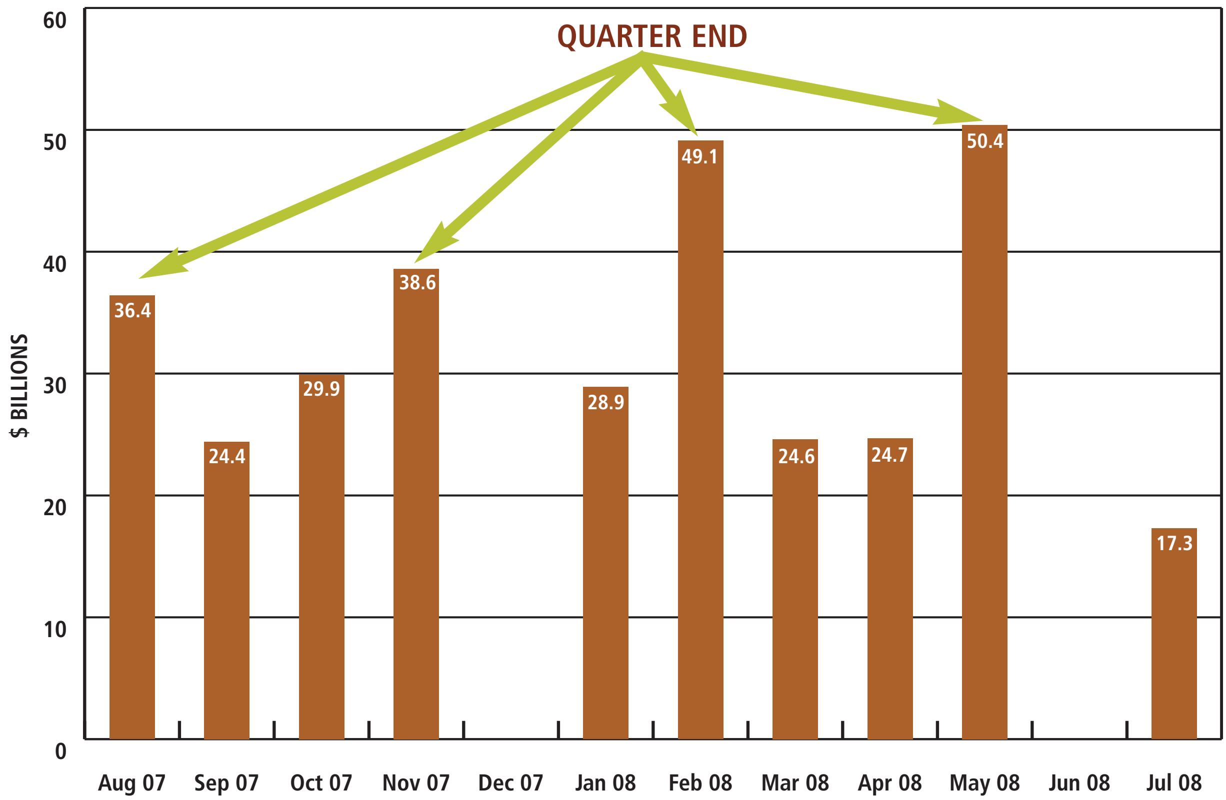
SFAS No. 140 provides the following: "A transfer of financial assets in which the transferor surrenders control over those assets is accounted for as a *sale* to the extent that consideration other than beneficial interests in the transferred assets is received in exchange. The transferor has surrendered control over transferred assets *if and only if all* of the following conditions are met:

- The transferred assets have been isolated from the transferor…
- Each transferee…has the right to pledge or exchange the assets it received…and no condition both constrains the transferee (or holder) from taking advantage of its right to pledge or exchange and provides more than a trivial benefit to the transferor.
- The transferor does not maintain effective control over the transferred assets through either (1) an agreement that both entitles and obligates the transferor to repurchase or redeem them before their maturity or (2) the ability to unilaterally cause the holder to return specific assets, other than through a cleanup call."

Of particular interest is part (1) of the third condition, which is exactly what Repo 105 did, with the possible exception of the "at maturity" loophole. More significant is the case of Repo 108, which involves an even larger haircut of 8% and uses *equity* securities as collateral. Equity securities have no maturity so can't possibly comply with this condition.

While the use of Repo 105 accounting had no material impact on the income statement, there was a significant

Figure 1: Repo 105 Usage



impact on the balance sheet. Whereas accounting for ordinary repurchase agreements increases both total assets and total liabilities, Lehman's Repo 105 accounting didn't increase either assets or liabilities in the first leg of the transaction. When the cash proceeds from the Repo 105 and 108 transactions were used to settle liabilities, both total assets and total liabilities were reduced, equity remained unchanged, and the leverage ratio improved.

Lehman had vetted its interpretation of how to account for repurchase agreements under SFAS No. 140 with its external auditor before adopting a formal Repo 105 accounting policy. Additionally, it acquired an opinion letter supporting its accounting treatment of Repo 105 transactions from Linklaters, a British law firm (apparently no U.S. law firm would give such an opinion letter). Thus, far from being diligent in following the "letter of law" as described in SFAS No. 140, Lehman appears to have violated it with at least Repo 108 if not Repo 105.

In substance, Repo 105 transactions were similar to ordinary repurchase agreements. For instance, in ordinary repo transactions, the borrower typically continues to receive the income from coupon payments of the securities that were transferred to the lender as collateral. Similarly, during the term of a Repo 105 transaction, Lehman continued to receive the stream of income through coupon payments from the securities it transferred. Additionally, just as in an ordinary repo transaction, Lehman was obligated to "repurchase" the transferred securities at a specified date. Moreover, Lehman used the same documentation to execute both Repo 105 and ordinary repo transactions, conducting these transactions with the same collateral agreements and substantially with the same counterparties. Thus the two types of transactions were similar in substance but differed significantly with respect to their balance sheet impact.

Since Repo 105 was a more expensive source of financing compared to ordinary repo agreements, its usage was timed around the end of reporting periods. For instance, the total amount of Repo 105 transactions at the end of first quarter (February) 2008 was approximately $49 billion. This dipped to approximately $24.6 billion as of April 30, 2008, and it spiked to $50.4 billion at the end of the second quarter (May) 2008 (see Figure 1, reproduced from the Examiner's Report).

Asset reduction and the consequent liabilities reduc-

Table 1: Effect of Repo Treament on Lehman's Leverage Ratio

QUARTER	AMOUNT OF REPO 105 USAGE	REPORTED NET LEVERAGE	LEVERAGE WITHOUT REPO 105	DIFFERENCE	DIFFERENCE AS PERCENTAGE OF REPORTED
Q4 2007	$38.60B	16.1	17.8	1.7	10.56%
Q1 2008	$49.10B	15.4	17.3	1.9	12.34%
Q2 2008	$50.38B	12.1	13.9	1.8	14.89%

tion were critical to Lehman because of its urgent need for short-term financing. To obtain favorable financing terms and maintain investor confidence, Lehman had to maintain a superior credit rating as well as favorable reports from financial analysts. The leverage ratio is a widely accepted measure of a company's health in the financial sector. Lehman defined its leverage ratio as net assets divided by equity. Its measurement of net assets eliminated certain types of assets from total assets, including intangibles and assets held as collateral. A reduction in net assets without a corresponding change in equity reduces the leverage ratio and boosts a company's perceived health. Accounting for a transaction as a Repo 105 instead of an ordinary repurchase agreement reduced assets and improved Lehman's leverage ratio.

The importance of the leverage ratio in analyzing Lehman's financial statements was widely recognized. Lehman's external auditor, Ernst & Young, included leverage in its definition of materiality: Any amount that "moved" net leverage by 1/10 of 1% was considered material. As the Examiner's Report documents, Lehman's use of Repo 105 moved net leverage by whole percentage points (see Table 1).

The amount of Repo 105 activity at period-end from late 2007 to mid-2008 ranged from $39 billion to $50 billion. While the magnitude of Repo 105 transactions was about 5% to 8% of approximately $700 billion total assets, and hence possibly not material with respect to total assets, its effect on the leverage ratio was about 10% to 15%. This raises concerns about materiality.

Materiality Judgments

Management accountants and auditors have the responsibility to assess materiality in the context of measures that are important to informed users of financial statements. The *IMA Statement of Ethical Professional Practice* states that practitioners have a responsibility to "disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations."

In a similar way, auditors' professional standards (contained in the American Institute of Certified Public Accountants' *AICPA Professional Standards*) state that the "auditor's consideration of materiality is a matter of professional judgment and is influenced by his or her perception of the needs of a reasonable person who will rely on the financial statements" (AU §312.10). Also, qualitative factors should include the potential effect of the misstatement on trends and the potential effect on the entity's compliance with regulatory provisions (AU §9312.17).

In hindsight, it's clear that Lehman's reported leverage ratios misstated the company's financial position, and, arguably, the amount of the misstatement was material. Since most external audit procedures focus primarily on verifying period-end account balances, the role of financial ratios in the auditor's judgment regarding whether the financial statements are fairly stated isn't straightforward. In situations such as this, when it's known that certain users are concerned about certain ratios (such as ratios incorporated in debt covenants or the leverage ratio for financial institutions), those considerations should guide the preparation and audit of the financial statements. The fallout from Lehman emphasizes the need to base materiality judgments about financial reporting on a user's perspective.

Substance over Form

Generally Accepted Accounting Principles (GAAP) provide auditors a common, uniform framework with which to judge the "fairness" of their audit client's financial statement presentation. Auditing standards state that the auditor's judgment should be based on whether, among other considerations, (1) the accounting principles selected and applied have general acceptance, (2) the accounting principles are appropriate under the circumstances, and (3) the financial statements, including the related notes, are informative about matters that may affect their use, understanding, and interpretation (AU §411.04). Auditing standards also state that the auditor should consider whether the substance of transactions or events differs materially from their form (AU §411.06).

The foremost concern that these professional standards raise is Lehman's assertion that its Repo 105 transactions satisfy certain criteria in SFAS No. 140 that seem to proscribe their treatment as short-term loans and thus require accounting for them as sales. Since Lehman was apparently the only bank using Repo 105-type transactions during this time period, and since apparently no U.S. law firm would support Lehman's accounting treatment, the conclusion that Lehman's interpretation of SFAS No. 140 had "general acceptance" seems tenuous.

According to Lehman's former global financial controller, a review of Lehman's 10-K and 10-Q forms wouldn't reveal Lehman's use of Repo 105 transactions. If the financial statement user's understanding of Lehman's financial position would be materially affected by knowledge of Lehman's Repo 105 activity, then financial reporting standards mandate its disclosure. Further, since the only apparent purpose of executing Repo 105 transactions in lieu of ordinary repo transactions was to manage Lehman's leverage ratios in its financial statements, Lehman's management must have known Repo 105 activity would affect users' judgments.

Even if Lehman's accounting for Repo 105 transactions was technically correct under SFAS No. 140, it didn't fairly reflect the transactions' substance. The substance of a Repo 105 transaction was to obtain short-term financing, although the form was a sale and separate agreement to repurchase. One primary feature of a "sale" is that the risks and rewards of ownership transfer to the buyer. In Repo 105 transactions, however, Lehman was entitled to collect interest and dividends from the "sold" securities. Additionally, Lehman used identical contract agreements and paperwork to document both normal repurchase agreements and Repo 105 transactions, implicitly acknowledging that the transactions were similar in substance. The critical issue then becomes whether raising the haircut from 2% to 5% is sufficient to fundamentally alter the transaction's substance since these transactions were similar in all other respects.

GAAP is often criticized as being rules-based and as serving as a poor model for reporting because it permits the recording of transactions in a way true to their form but not their substance. Management accountants and auditors, however, violate their professional standards when they allow their company or their clients to apply GAAP in a manner that deliberately obscures the economic substance of transactions. A fundamental financial reporting objective that overrides the application of any specific rule is that the accounting of a transaction should not obfuscate its economic substance.

In contrast to GAAP, International Financial Reporting Standards (IFRS) are principles-based. Under this type of approach, like transactions are accounted for in a similar manner. Proponents of principles-based standards in general—and of IFRS in particular—argue that such standards eliminate the mechanism for Repo 105-type abuses.

Responsibility of Lehman Employees: Guidance from IMA®

It's well accepted that financial statements are the responsibility of a company and its management. Accounting policies, therefore, are at the discretion of a company's management and its employees. Although you could argue that Lehman's external auditors are culpable for failing to detect or report the shortcomings in the financial reporting process, the ultimate responsibility lies with Lehman's management for developing and using Repo 105 for the purpose of managing its balance sheet.

The mechanisms to prevent an organization from failing to adhere to ethical behavior are addressed in two IMA Statements on Management Accounting (SMAs). First, the *IMA Statement of Ethical Professional Practice* states the overarching principles that drive ethical behavior of accountants and financial professionals in business (see www.imanet.org/PDFs/Statement%20of%20Ethics_web.pdf). Second, *Values and Ethics: From Inception to Practice* discusses the stages to develop and implement a values-based ethics system within an organization to meet compliance requirements and create ethical sustainability as the organization grows and develops.

Lehman Brothers failed to adhere to the principles contained in both SMAs: Its staff acted in an unethical manner, and it failed to implement an ethical culture within the organization. In pursuing Repo 105 and 108 transactions, Lehman Brothers possibly complied with the letter of existing financial reporting rules but definitely not with the spirit. The actions taken by certain employees were certainly unethical. As noted in IMA's *Values and Ethics*, "Ethical behavior is not about abiding by the law. Individuals and organizations can act legally and still be acting unethically. Ethical behavior is driven by compliance with a set of values that acts as the touchstone for situational decisions where rules may not exist to cover every alternative."

Most companies adopt standard operating procedures and policies that state how various situations should be handled. In order to ensure adherence to these policies, organizations establish internal controls that rely on the integrity and behavior of the employees. Without an ethical environment, ways will be found to circumvent controls.

The need for an ethical culture is perhaps greatest when an unplanned event occurs. Without a policy to refer to, individuals will develop a course of action that they believe represents the "policy" of the organization. This action will be based on what the employees believe are the organization's values and ethical code. As noted in IMA's *Values and Ethics*, "Failure to have every individual in the organization know and understand these values and ethical code leads to inconsistency and, in the worst cases, unethical or fraudulent behavior."

The code of ethics must come from the board of directors and senior management to give it credibility and reinforce the system of internal controls. Top management at Lehman failed to do this. Lehman management was intent on reporting favorable leverage ratios and engineered a course of action to do so—without apparent regard for the ethical implications.

Higher Standards

Although the specific financial instruments that Lehman used to manage its financial statements apply primarily to the financial services industry, the events at Lehman provide lessons about corporate governance that apply to *all* organizations. First, all parties with meaningful roles in the financial reporting process shouldn't apply accounting rules with the intent to obfuscate the economic substance of transactions. As a corollary to this rule, if the transaction has no economic substance but serves only to window-dress the financial statements, its proper disclosure will eliminate any incentive to engage in the transaction.

Second, professional standards established for each party in the financial reporting process, including the standards IMA promulgates, set the bar for fair reporting higher than technical adherence to the letter of the law. External auditors, internal auditors, and management accountants all have professional standards that are aspirational in nature, and, regardless of whether Lehman's auditors and accountants met the minimum standards that might shield them from legal liability and formal professional sanction, it seems clear that they fell short of the higher standards to which all management accountants and auditors should aspire. **SF**

Saurav K. Dutta, CMA, Ph.D., is an associate professor of accounting at the University at Albany, SUNY and is an IMA Member-at-Large. He is currently serving as an Academic Fellow at the Securities & Exchange Commission (SEC). You can reach Saurav at (914) 830-9083 or SDutta@uamail.albany.edu.

Dennis Caplan, CMA, CPA, is an assistant professor of accounting at the University at Albany, SUNY and an IMA Member-at-Large. You can reach Dennis at (518) 442-4939 or DCaplan@uamail.albany.edu.

Raef Lawson, CMA, CPA, CFA, AICWA, FCMA, Ph.D., is Professor-in-Residence and vice president of research at IMA. He also is a member of IMA's North Jersey Shore Chapter. You can reach Raef at (201) 474-1532 or rlawson@imanet.org.

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