Black and white and red all over: Lehman Brothers' inevitable bankruptcy splashed across its financial statements

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Abstract

The recent financial crisis offers a prime context to revisit the techniques currently used to predict firms' financial distress. The numerous bankruptcies and financial difficulties experienced by US banks and financial institutions in 2008, events that analysts failed to predict, point to shortcomings in existing financial analysis techniques.

Annual and interim financial statements produced by listed companies are part of the information that all stakeholders can use to judge the performance and viability of these firms over a short-term horizon (generally 12 months, up to 24 months). Such analyses of financial statements center on the balance sheet, which depicts the financing structure and the liquidity/solvency of an organization, along with the income statement, which portrays performance in terms of profits or losses sustained.

The purpose of this article is to analyze the statements of cash flows in order to establish whether the failure of Lehman Brothers could have been predicted. Our analysis shows that the following signs of financial distress were detectable in Lehman Brothers' 2005-2007 financial statements:

- *Chronic inability to generate cash from operating activities;*
- *Massive and systematic investments in working capital items, and even more intensive investments in financial instruments;*
- *Systematic use of external financing (mainly long-term debt) to offset operating deficits;*
- *Steady deterioration of the cash situation over three consecutive years.*

Although Lehman Brothers had $7.286 billion in cash and cash equivalents on November 30, 2007, the analysis of its statement of cash flows signals major dysfunctions in working capital management. This is particularly striking for financial instruments: over a three-year period, they generated net negative cash flows of $161.657 billion. The systematic payment of dividends despite sizeable cash deficits in operating activities, not to mention the financing of dividends through long-term loans, also points to dysfunctional cash management.

In conclusion, we argue that Lehman Brothers' statements of cash flows for the years 2005, 2006, and 2007 were very strong predictors of its bankruptcy, which occurred on September 15, 2008. Because they emit clear signals of imminent financial distress starting from 2006, the statements of cash flows are highly informative and are thus of great value to investors and analysts.

KEY WORDS: Bankruptcy prediction – Financial crisis – Cashflow analysis.

Introduction

The recent financial crisis offers a relevant context to revisit the current techniques used in predicting firms' financial distress. The numerous bankruptcies and financial difficulties experienced by US banks and financial institutions in 2008, events that analysts failed to predict, point to shortcomings in existing financial analysis techniques.

The annual or interim financial statements produced by listed companies are part of the information that all stakeholders can use to judge the performance and the viability of these firms over a short-term horizon (generally 12 months, up to 24 months). Such analyses of financial statements centre on the balance sheet, which depicts the financing structure and the liquidity/solvency of an organization, along with the income statement, which portrays performance in terms of profits or losses sustained. The statement of cash flows, which illustrates a company's capacity to transform its results into cash, has been virtually ignored by analysts, who tend to focus instead on the balance sheet and the income statement. Using financial data produced by Lehman Brothers in the three years leading up to its bankruptcy, the following research question is answered: Is the statement of cash flows a reliable predictor of the financial distress of a company?

In March, 2010 a devastating report [1] recounted in minute detail the practices carried out by Lehman Brothers, an institution founded in 1850 that declared bankruptcy on September 15, 2008. Notably, the executives were accused of "gross negligence" in their duty of disclosure. Beyond the lies that the legal authorities may eventually bring to light, is it possible that warning signs of this financial catastrophe were indeed emitted but were not detected by investors? The financial information that Lehman Brothers released to the markets in the years preceding its failure is examined below, as proof that such warning signs were indeed perceptible. Although Lehman Brothers had $7.286 billion in cash and cash equivalents on November 30, 2007, an analysis of its statement of cash flows signals major dysfunctions in working capital management. This is particularly striking for the financial instruments: over a three-year period, they generated net negative cash flows of $161.657 billion. The systematic payment of dividends despite sizeable cash deficits in operating activities, not to mention the financing of dividends through long-term loans, also points to dysfunctional cash management. Applying the Altman financial distress prediction model (1968)[2], one can observe that Lehman had been clearly sending signals of financial distress since 2005. The company's coefficient was well below 1.81 (Altman's threshold of financial distress) for the three years preceding bankruptcy; namely 0.0823 in 2005, 0.0965 in 2006, and 0.0891 in 2007. The average coefficient over these three years (0.0897) also supports this observation.

Although much has been said about this financial crisis, perhaps the users of these firms' financial statements simply did not understand them or were blinded by the superficial performance of these organizations, forgetting that the true performance of a company should ultimately be reflected in its liquidity? This Lehman Brothers study will first review the events of 2008, a year during which several financial institutions failed or experienced serious financial distress. The nature of this crisis and its immediate consequences will then be examined, along with the immediate reactions of various stakeholders. Following this, the main models and techniques used in forecasting corporate financial distress, both in research and practice (by analysts and rating agencies), will be explained.

The purpose of this article is to analyze the 2005-2007 statements of cash flows in order to establish whether the failure of Lehman Brothers could have been predicted. A financial distress prediction model (Altman, 1968)[3] is used to complement our cash flows statements' analysis. Analysts' evaluations of Lehman in the years preceding the bankruptcy were unavailable. However, by looking at public information, we could infer the analysts' perception of the company. The ultimate goal of this process is to demonstrate the informative value of the statement of cash flows in predicting financial distress.

2008: Armageddon[4] year for financial markets

Lehman Brothers
"We are on the right track to put these last two quarters behind us."
CEO Richard Fuld on Sept. 10, 2008

"Our liquidity pool also remains strong at $42 billion.... Throughout the market volatility of the past six months, our liquidity and funding framework has served us extremely well, and we remain focused on increasing the funding available in our bank entities and mitigating any liquidity risks to our secured and unsecured funding positions." –
CFO Ian Lowitt
Filed for Chapter 11 protection
on Sept. 15, 2008, the largest bankruptcy in history.[5]

"Armageddon" was the term employed by Roger Parloff, publisher of Fortune Magazine, to describe the catastrophe that occurred in the financial markets in 2008. In January 2009,[6] he recalled the reassuring and outrageously optimistic words uttered by the executives of some of these financial institutions a few months or a few days (in some cases even a few hours) before they declared bankruptcy or unveiled their true situation of serious financial distress, the same executives looking suddenly crestfallen.

Concerning companies ranging from AIG, Bear Stearns, Countrywide Financial Corp., Fannie Mae, Lehman Brothers, Merrill Lynch and Washington Mutual to Wachovia, not a word has been said about the cash flow problems that ultimately prevailed over the false prosperity reported by these companies. "Our liquidity and balance sheet are strong.... We don't see any pressure on our liquidity, let alone a liquidity crisis", said Alan Schwartz, Bear Stearns CEO, on March 12, 2008, less than 36 hours before he appealed to the Federal Reserve emergency fund.[7]

In September 2008, the Federal Bureau of Investigation (FBI) launched a fraud enquiry against 26 Wall Street institutions, including Lehman Brothers, AIG, Fannie Mae and Freddie Mac. The investigation was notably intended to determine whether the top managers of these finance giants were responsible for their companies' downfall. Until March 2010, no lawsuits had been filed against Wall Street executives despite the sweeping investigations by the FBI.[8] On April 16, 2010, the SEC announced its intention to sue the commercial bank Goldman Sachs for fraud. The bank is accused of having sold *Collateralized Debt Obligations* (CDOs) to its clients and taking short positions that effectively eroded the value of these securities. In doing so, Goldman Sachs also helped other clients to short the mortgage bond market, and triggered the plunge of the subprime market.[9] Rumors of collusion between banks soon followed. Connecticut Attorney General Richard Blumenthal announced that his office was already processing the Goldman file.[10] As he explained in a press release:

> A key question is whether this case was an isolated incident or part of a pattern of investment banks colluding with hedge funds to purposely tank securities they created and sold to unwitting investors. The Wall Street bankers and anyone who knowingly and purposely profited from this alleged scheme should be held accountable.[11]

"We say that America is derailing. In fact, it is hunting for culprits: executives that became 'partisans of state control,' embezzling public funds, 'corrupt' bankers..." [our translation], the French newspaper Le Monde reported in October 2008, when the crisis was in full swing.[12] The "culprits" identified include greedy Wall Street traders, the debt load of American households, the Fed's action, and the apostles of deregulation. In this crisis, guilty parties abound, and rating agencies have swiftly been blamed: the idea began to spread that they might well have to pay for their financial crisis just as audit firms did for the Enron crisis.[13] These agencies might not have been negligent, but they have been incompetent. They were not equipped to correctly evaluate particularly sophisticated financial instruments. "Rating agencies continue to create [an] ever bigger CDO market. Let's hope we are all wealthy and retired by the time this house of cards falters." As Fortune Magazine reports, this internal e-mail communication between two employees of the credit rating agency Standard and Poor's ended with an emoticon (wink and a smile).[14]

The crumbling of this "house of cards" was triggered by what is now known as the "subprime crisis," which began in the summer of 2007. Subprime loans refer to inferior quality (sub) real estate loans whose higher risk of payment default is countered by the bank with a higher interest rate.[15] These mortgage loans, granted at variable rates, were extended to American households with modest incomes.[16] The American financial sphere first suffered from the consequences of the subprime crisis, but it quickly spread to other large financial centres, and also affected nonfinancial companies.[17] The rise in key interest rates by the American Federal Reserve (the banks subsequently imposed more severe conditions on their clientele by passing this hike along, notably in real estate credit), combined with the dissipation of demand for real property (dragging prices downward), fuelled an increase in default on payments and cases of insolvency.[18]

These failures caused a chain reaction on the markets. The vector: securitization vehicles designed to allow a company or a bank holding assets with little liquidity to group them together and sell them to a specialized entity often created specifically for this purpose.[19] Securitization therefore enables an organization to dispose of assets while immediately obtaining capital in exchange, a process which represents a new means of financing for these entities.[20] Credit then becomes liquid; however, if it is based on a poor risk, someone will eventually have to pay the piper.[21]

The U.S. government quickly reacted to this bloodbath: it proposed a rescue plan for banks in September 2008. In early 2010, when the crisis seemed to abate and the American banks showed positive signs of a turnaround, attention shifted towards the accountability of the executives of one of these institutions accused of being central to this financial debacle. On March 12, 2010, a 2,200 page inquiry report prepared by legal expert Anton R. Valukas[22] revealed the extensive use of accounting manipulations that might have largely contributed to the collapse of Lehman Brothers, which went bankrupt on September 15, 2008. This report sheds light on the systematic use of a balance sheet window-dressing technique called Repo 105,[23] which let Lehman remove roughly $50 billion in commitments from its balance sheet in June 2008, and artificially reduce its net debt level by wagering on the collateralized loan market.[24] Asked why Lehman failed, Valukas replies:

> Lehman failed because it was unable to retain the confidence of its lenders and counterparties and because it did not have sufficient liquidity to meet its current obligations. Lehman was unable to maintain confidence because a series of business decisions had left it with heavy concentrations of illiquid assets with deteriorating values such as residential and commercial real estate. [25]

The legal expert accuses Lehman executives of having deliberately manipulated information disclosed in financial statements. He also blames the auditors (Ernst & Young),[26] whom he said closed their eyes to the manipulations in question, which date back to the early 2000s:

> Lehman did not disclose its use – or the significant magnitude of its use – of Repo 105 to the Government, to the rating agencies, to its investors, or to its own Board of Directors. Lehman's auditors, Ernst & Young, were aware of but did not question Lehman's use and nondisclosure of the Repo 105 accounting transactions.[27]

Valukas asserts that Dick Fuld, ex-CEO of Lehman, exhibited gross negligence regarding Lehman's obligations of disclosure, and that this attitude reflected a flagrant disdain for his duties.[28] On December 20, 2010 New York Attorney General, Andrew Cuomo, announced that Ernst & Young will be sued for fraud for allegedly helping Lehman Brothers mislead investors. The Valukas report was surely "the spark that ignited" Cuomo's interest, said Harvey Miller, Lehman's lead bankruptcy lawyer, in an interview.[29] REPO 105 is similar to standard repurchase agreement transactions with one major difference: Lehman treated these financing operations as sales of assets instead of treating them as loan transactions.[30] Under these repurchase agreements, Lehman sold assets, notably real estate, to a partner on the eve of publication of its accounts, only to buy them back a few days later. The purpose of this maneuver was to burnish its balance sheet by temporarily reducing its debt level. The figure 105 signifies that the products sold by Lehman were valued at 105% of the cash it collected in exchange.[31] In doing so, Lehman could treat these transactions as sales and remove these securities from its balance sheet.[32]

However, as The Economist reports, Lehman Brothers' actions were controversial among the professionals it hired, at the time these transactions took place: [33]

> (…) unable to find an American law firm to approve the transaction as a "true sale" of assets, Lehman got the nod from Linklaters in London.
>
> (…) Although Repo 105 appears to have been in line with American accounting standards, its effect was to deceive. The technique allowed Lehman to reduce its reported leverage substantially and thus avoid ruinous ratings downgrades as it fought for survival. Investors would like to think that auditors consider not just the letter of the rules but their spirit, too.

The schemes Lehman allegedly carried out using REPO 105 therefore had a significant impact on its balance sheet by undervaluing its liabilities. The income statement was also affected, but to a lesser extent: financing costs were undervalued given that Lehman did not recognize these REPO transactions as loans. However, with respect to the cash flows involved in these transactions, inflows and outflows of funds are the same regardless of the accounting method used. Artus *et al*.[34] maintain that the financial crisis affected the results of banks through several channels: increased default by real estate borrowers; write-offs of debts previously or being securitized that banks had to reintegrate in their balance sheets (because they could no longer be financed by such vehicles); and write-offs of portions of CDOs (Collateralized Debt Obligations) that the banks had to conserve because they could not sell them to investors. Investigations like the one Anton R. Valukas did of Lehman cast doubt on the validity of the financial information supplied by similar institutions in the years preceding the crisis. These institutions were apparently trying to minimize their debt level.

One can therefore suspect that the assets related to real estate loans or securitized debts were worth less than the value that was indicated in the financial statements. Notes to the financial statements are also likely to have been affected: guarantees given but not disclosed, lack of transparency in the information related to complex accounts, etc. However, only one financial statement is consistently immune to potential manipulations of the balance sheet, statement of income, and the related notes: the statement of cash flows. This statement depicts the origin and the use of cash by the company during the fiscal year. Thus, unless they willingly falsify the amount of cash possessed by the firm at the end of the year, it is difficult for "manipulators" of financial information to tamper with the statement of cash flows.

The financial crisis occurred six years after the adoption of the Sarbanes-Oxley Act (SOX)[35] in 2002, intended to be a rigorous initiative by the American government to prevent a recurrence of the financial scandals of the early 2000s. This legislation made certain governance and internal control practices obligatory and amended the regulatory framework of the accounting practice, including the audit of public companies' financial statements. It is still too early to affirm whether the misappropriations of funds that were characteristic of the early 2000s scandals still occurred in 2008. The following excerpt from the Valukas Report[36] (published in March 2010) on Lehman Brothers certainly provides food for thought:

> On January 29, 2008, Lehman Brothers Holdings Inc. ("LBHI") reported record revenues of nearly $60 billion and record earnings in excess of $4 billion for its fiscal year ending November 30, 2007. During January 2008, Lehman's stock traded as high as $65.73 per share and averaged in the high to mid-fifties, implying a market capitalization of over $30 billion. Less than eight months later, on September 12, 2008, Lehman's stock closed under $4, a decline of nearly 95% from its January 2008 value. On September 15, 2008, LBHI sought Chapter 11 protection, in the largest bankruptcy proceeding ever filed.
>
> There are many reasons Lehman failed, and the responsibility is shared. Lehman was more the consequence than the cause of a deteriorating economic climate. Lehman's financial plight, and the consequences to Lehman's creditors and shareholders, was exacerbated by Lehman executives, whose conduct ranged from serious but non-culpable errors of business judgment to actionable balance sheet manipulation; by the investment bank business model, which rewarded excessive risk taking and leverage; and by Government agencies, who by their own admission might better have anticipated or mitigated the outcome.

These words instill an uncanny sense of *déjà vu*…

The next section describes the models frequently employed in research and in practice for making financial distress predictions. The variables that specifically predict company failure in these models will be highlighted.

Theoretical and practical financial distress prediction models

The first studies of companies' financial distress, published in the 1960s, were based on financial ratios. These ratios are pertinent because bankrupt companies systematically present similar financial characteristics in the years prior to their bankruptcy. Consequently, it seemed easy to construct a failure prediction model based on these ratios. Accordingly, users of financial statements have developed various techniques to evaluate financial distress, which "[i]n terms of sources and uses of funds, [...] occurs when the inflow of funds from operations is not sufficient to meet required outflows".[37] A firm in financial distress is therefore unable to honour its commitments, which may include payment of interest or repayment of the principal of its debt, from the cash flows from its operations.

Theoretical prediction models

In his study of financial distress prediction models, Beaver (1966)[38] focused on only one variable at a time to detect financial distress up to five years before a firm's bankruptcy. Thus, a firm exhibiting low solvency or poor profitability could be considered to be in a precarious situation. The fact that this conclusion is based solely on one facet of the company in financial difficulty is considered by Edward Altman (1968, p.591)[39] to be a weakness of Beaver's work. Beaver introduced the use of financial analysis of accounting items to estimate the risk of financial distress. He selected a sample of 79 firms that went bankrupt between 1954 and 1964, and compared the ratios of these 79 firms with the ratios of 79 other firms in the same sector that were not under financial distress. Over a five year period, Beaver correctly determined in 87% of the cases whether the companies would fail in the year following the analysis.

The author demonstrated that the ratios of internally generated funds to total debt and the return on equity (ROE) were better predictors of financial distress than the liquidity ratios. According to Beaver, this is because these ratios represent the current and long-term profile and financial situation of the firm more accurately. To address the specification problems of the Beaver model, particularly its use of only one variable at a time, Altman proposed models combining several ratios.

Applying discriminant analysis, Edward Altman developed a Z-score model that predicts the financial distress of companies. He was one of the first to question the pertinence of using a single variable to predict financial distress (Altman 1968, p.592). The main advantage of discriminant analysis is that it can deal with several variables that define the complete profile of a firm rather than simply analyzing one factor. Discriminant analysis "is a statistical technique used to classify an observation into one of several *a priori* groupings dependent upon the observation's individual characteristics. It is used primarily to classify and/or make predictions in problems where the dependent variable appears in qualitative form, e.g., male or female, bankrupt or non-bankrupt" (Altman, 1968, pp. 591-592). The dependent variable in this case is the failure (or not) of a company. The model separates companies in financial difficulty from those that are not. Based on the selected independent variables (ratios), and a fixed timeframe, discriminant analysis derives a linear equation that singles out the results of different groups based on the coefficients (constants) of the model. The typical discriminant function has the following form:

$$Z = v_1 x_1 + v_2 x_2 + v_3 x_3 + v_4 x_4 + v_5 x_5$$

Where:
V is a coefficient (discriminant);
X is a ratio (independent variable);
Z is an index of prediction of financial distress (dependent variable).

Altman developed a model for general use based on a sample of 66 companies, 33 of which were in a situation of financial distress, whereas the remainder was not. The group of distressed companies was selected based on the fact that they were in a legal situation of bankruptcy between the years 1964 and 1965. In addition, this group was made up entirely of companies in the manufacturing sector, with average assets of $6.4 million. The second group of companies (the remainder) was not facing bankruptcy, and was selected randomly. This second group was further broken down by industrial sector and company size. Thus, manufacturers with total assets of between $1 million and $25 million were selected. In addition, these companies were still operating in 1966. Once the groups were defined and the firms selected, the balance sheets and income statements of each firm were analyzed. Following the first analysis of the data gathered from the 66 firms, a list of 22 ratios with explanatory potential to predict financial distress was produced.

These 22 independent variables were grouped into five categories: liquidity, profitability, lever effect, solvency, and activity ratios. These categories were chosen based on their use in the literature and their relevance to Altman's study. From the original list of 22 ratios, the five ratios considered as the most pertinent to predict financial distress were selected. To do so, Altman looked at the relevance of the ratios and their correlation.The integration of these five variables in a single equation yielded the greatest success rate for predicting financial distress. The model nonetheless eliminated certain variables that, taken individually, had considerable predictive power. The final function therefore contained the following coefficients (Altman 1968, p. 594):

$$z = 0.012x_1 + 0.014x_2 + 0.033x_3 + 0.006x_4 + 0.999x_5$$

Where:
X_1 = Working capital/Total assets;
X_2 = Retained earnings/Total assets;
X_3 = Earnings before income taxes and interest (EBIT)/ Total assets;
X_4 = Market value of equity/Book value of total debt;
X_5 = Sales/Total assets ;
Z = Index of prediction of financial distress.

Empirically, three ratios exhibited the greatest discriminating capacity. In order of importance (Altman 1968, p.597):

- Retained earnings /Total assets (X_2),

- Market value of equity/Book value of total debt (X_4),
- Working capital/Total assets (X_1).

According to Altman's results, companies with a Z score higher than 2.99 were not in financial distress. In contrast, those with a Z score below 1.81 were in a situation of potential bankruptcy. Lastly, companies whose rating was between 1.81 and 2.99 were considered to be in a gray area; it was impossible to predict their capacity to continue their operations. The use of this Z score was intended to avoid multiple classification errors arising from the use of a single score. In its simplest form, the Altman model establishes an average Z score of 2.675, below which companies are considered in poor financial health (Altman 1968, p. 606-607).

Overall, in his original study, Altman's Z score model achieved a 95% success rate in predicting failure one year in advance, while correctly predicting bankruptcy two years before the event in 72% of the cases.

Prediction techniques used by analysts

When analysts assess banks' solvency (creditworthiness), they examine its business and financial risks. Economic cycles and competition have an undeniable influence on bank performance. The management team is judged on its capacity to manage risk, to capture and hold market share, and to react in a timely fashion to a changing environment. The assessment of the robustness and financial stability of a bank is also very important to enable analysts to formulate a clear opinion regarding its solvency.[40]

The rating agency Standard & Poor's[41] recommends analyzing a bank along two lines: profitability and financial condition.

Profitability

Analysts should consider the following ratios and results data: [42]

- **Return on assets (ROA).** A comprehensive measure of bank profitability is ROA—a bank's net income divided by its average total assets during a given period. (…)(p. 29)
- **Return on equity (ROE).** Another measure of profitability, usually considered in conjunction with ROA, is return on equity. A bank's ROE is calculated by dividing net income by average shareholders' equity. (p. 29)
- **Yield on earning assets (YEA).** (…) The YEA is calculated by dividing interest income on earning assets by the average value of these assets during the same period. (…) (p. 27)
- **Cost of funding earning assets (COF).** (…) The COF is calculated by dividing the total interest expense on the funds a bank uses to support earning assets by the total average level of funds employed in that way. (…)(p. 28)
- **Net interest spread (NIS).** The NIS is simply the YEA minus the COF. (…)(p. 28)
- **Net interest margin (NIM).** The NIM is calculated by dividing the FTE [fully tax equivalent] net interest income by average earning assets. (…)(p. 28)
- **Provision for loan losses.** The provision for loan losses should be considered along with the NIM when evaluating the quality of a bank's financial performance. (…)(p. 28)
- **Non-interest income.** Noninterest income includes service charges on deposit accounts, along with trust, mortgage banking, insurance commissions, and other fees. (…)(p. 29)
- **Non-interest expenses and the efficiency ratio.** To calculate the efficiency ratio, add back foreclosure and repossession expenses, amortization of intangibles, and impairment of goodwill to noninterest expenses; then divide that figure by total revenues. (…)(p. 29)

Financial condition

To evaluate a bank's financial situation, it is recommended to analyze the following financial data: [43]

- **Reserve for loan losses.** (…) This reserve appears on a bank's balance sheet as a contra account, or a net reduction, to loans outstanding. (…) For the outside analyst, the value of this measure is that it provides a way to judge the quality of the loan portfolio and whether the bank's officers are managing it adequately. (…) (p.30)
- **Net charge-offs.** Net charge-offs consist of gross charge-offs netted against recoveries. (…)(p.30)
- **Nonperforming loans.** Loans on which income is no longer being accrued and repayment has been rescheduled are considered nonperforming. (…)(p.30)

- **Capital levels.** The Federal Reserve System has established two basic measures of capital adequacy with which bank holding companies must comply: a risk-based measure and a leverage measure. (…) (p.31)
- **Debt leverage.** (…) One measure of leverage is long-term debt divided by the sum of equity and total debt. (…)(p.31)
- **Liquidity.** (…) One gauge of liquidity is the proportion of loans outstanding to total assets. (…) (p.31)
- **Derivatives.** (…) Banks generally use derivatives to hedge a variety of risks, including interest rate changes. (p.31)

The above recommendations clearly imply that analysts concentrate their attention only on the balance sheet and the income statement when they assess the financial stability of a bank. Cash flows are not part of the ratios or elements analyzed, when assessing a bank's profitability or financial situation.

Statement of cash flows: informative value for financial institutions?

For nonfinancial corporations, the informative value of the statement of cash flows is hardly in doubt. This financial statement notably allows investors to gauge the capacity of a company to generate cash from its operations. Figures for funds provided by operations[44] (potential cash) allow investors to evaluate the company's capacity to invest in its working capital. This investment or divestiture of working capital illustrates the strategies adopted by the firm regarding the way it manages its inventory, accounts receivable, accounts payable, etc. Lastly, cash flows provided by (used in) operating activities during a period (real liquid assets) can indicate the company's maneuvering room to make new investments, to lower its debt level, to redeem stock, etc. The statement of cash flows also enables readers to detect firms that systematically use external funds to compensate for chronic deficits in their operating activities.

For financial institutions, the informative value of the statement of cash flows has been questioned outright. However, the Financial Accounting Standards Board (FASB)[45] has ignored the arguments advanced by the banks to prove that the statement of cash flows is not a valid way to assess their liquid assets.[46] Asked to comment on the exposure draft related to the statement of cash flows, banks claimed that both the nature of their business and the resulting cash flows had little to do with the reality of nonfinancial corporations:

> (…) Respondents from financial institutions, particularly commercial banks, generally said that a statement of cash flows would not be useful for their industry. (…) (p.21)
> (…) They commented that a bank creates money through its lending activities. That, they said, makes cash the "product" of a bank's earning activities, just as finished goods are the product of a manufacturer's earning activities. (p.22)

Although it recognized the distinctive characteristics of the banking sector (which it did not, however, consider more numerous than for many companies operating in other sectors), the FASB concluded that the statement of cash flows is indeed indispensable to the analysis of banks:

> (…) While a bank is unique in the sense that cash can be viewed as its product, a bank needs cash for essentially the same reasons a manufacturer does—to invest in its operations, to pay its obligations, and to provide returns to its investors. To survive, a bank—like a manufacturer—must generate positive (or at least neutral) cash flows from its operating, investing, and financing activities over the long run. (…) (p. 22)
>
> (…) While the cash flows of a bank may be larger, the turnover faster, and the reliance on borrowed funds greater than for a nonfinancial enterprise, the Board decided that the substance of a bank's cash flows is similar to that of a nonfinancial enterprise. (…) (p. 22)

According to the FASB, even if banks manage more important cash flows than nonfinancial corporations, this does not discount the value of the statement of cash flows. The FASB points out that the equity of banks is proportionately lower relative to their assets and liabilities than it is for nonfinancial corporations. However, this does not detract from the pertinence of the ratios that include assets in their calculation.

The FASB flatly refuted one of the banks' objections to producing a statement of cash flows:

> (…) 62. The Board also considered the argument that other information such as interest rate sensitivities and maturity schedules of loans and borrowings is more useful than a statement of cash flows in assessing a bank's liquidity, financial flexibility, profitability, and risk and that this other information should therefore be substituted for a statement of cash flows.

> The Board acknowledged the potential usefulness of that information but rejected the argument for substitution, noting that, as Concepts Statement 5 states, the assessment of liquidity, financial flexibility, profitability, and risk for any enterprise requires more information than just a statement of cash flows. (…) (p. 23)

The box "Financial Institutions Inc. – Statement of Cash flows"[47] shows a typical statement of cash flows that meets the specific FASB requirements for financial institutions.

Considering the reticence banks clearly expressed to the American body in charge of setting accounting standards, the FASB, it is not surprising that the statement of cash flows is not central to banks' financial analysis. Asked how to analyze a bank, rating agency Standard & Poor's replied:

> When evaluating a bank, an analyst should consider both its profitability and its financial condition. Taken alone, short-term profit trends can be misleading. For example, if a bank achieves loan growth by engaging in excessively risky lending, it may be vulnerable to developments that would hurt its earnings or even threaten its survival over time.[48]

Analysts thus focus on the balance sheet and the income statement. The statement of cash flows is virtually ignored in their analysis. However, the following objectives are stated in the FASB standard FAS 230 – *Statement of cash flows*:[49]

> **10-1** The primary objective of a statement of cash flows is to provide relevant information about the cash receipts and cash payments of an entity during a period.
> **10-2** The information provided in a statement of cash flows, if used with related disclosures and information in the other financial statements, should help investors, creditors, and others (including donors) to do all of the following:
> a. Assess the entity's ability to generate positive future net cash flows
> b. Assess the entity's ability to meet its obligations, its ability to pay dividends, and its needs for external financing
> c. Assess the reasons for differences between net income and associated cash receipts and payments
> d. Assess the effects on an entity's financial position of both its cash and noncash investing and financing transactions during the period.

It is odd that banks affirm that there is no need for them to present a statement of cash flows. More surprisingly, analysts do not recognize its informative value. All the same, the objective of this financial statement indeed reflects the reality of banks (particularly the objectives formulated in 10-2 c and d) of standard FAS 230). It is therefore worth questioning whether the statement of cash flows is a reliable predictor of the financial distress of a company. The case of banks is certainly revealing. In answering this question, we hope that the value of this financial statement for predicting financial distress will get its rightful recognition. The next section presents our analysis of Lehman Brothers' statements of cash flows for a three-year period (2005-2007). We have complemented our statements of cash flows' analysis by using Altman's (1968) model of financial distress prediction. In addition, we have examined the predictions by market analysts (see Appendix 3) a few months before Lehman declared bankruptcy on September 15, 2008.

Appendix 1 lists the milestones in the history of Lehman Brothers, the main business risks that the company faced, and some and shocking statements by CEO Richard Fuld a few months before the bankruptcy. Appendix 2 contains pertinent financial data on the company for the years 2005, 2006 and 2007.

FINANCIAL INSTITUTION, INC.
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 19X1

Cash flows from operating activities:		
Interest received	$ 5,350	
Fees and commissions received	1,320	
Proceeds from sales of trading securities	20,550	
Purchase of trading securities	(21,075)	
Financing revenue received under leases	60	
Interest paid	(3,925)	
Cash paid to suppliers and employees	(795)	
Income taxes paid	(471)	
Net cash provided by operating activities		$ 1,014
Cash flows from investing activities:		
Proceeds from sales of investment securities	2,225	
Purchase of investment securities	(4,000)	
Net increase in credit card receivables	(1,300)	
Net decrease in customer loans with maturities of 3 months or less	2,250	
Principal collected on longer term loans	26,550	
Longer term loans made to customers	(36,300)	
Purchase of assets to be leased	(1,500)	
Principal payments received under leases	107	
Capital expenditures	(450)	
Proceeds from sale of property, plant, and equipment	260	
Net cash used in investing activities		(12,158)
Cash flows from financing activities:		
Net increase in demand deposits, negotiable order of withdrawal accounts, and savings accounts	3,000	
Proceeds from sales of certificates of deposit	63,000	
Payments for maturing certificates of deposit	(61,000)	
Net increase in federal funds purchased	4,500	
Net increase in 90-day borrowings	50	
Proceeds from issuance of nonrecourse debt	600	
Principal payment on nonrecourse debt	(20)	
Proceeds from issuance of 6-month note	100	
Proceeds from issuance of long-term debt	1,000	
Repayment of long-term debt	(200)	
Proceeds from issuance of common stock	350	
Payments to acquire treasury stock	(175)	
Dividends paid	(240)	
Net cash provided by financing activities		10,965
Net decrease in cash and cash equivalents		(179)
Cash and cash equivalents at beginning of year		6,700
Cash and cash equivalents at end of year		$ 6,521
Reconciliation of net income to net cash provided by operating activities:		
Net income		$ 1,056
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	$ 100	
Provision for probable credit losses	300	
Provision for deferred taxes	58	
Loss on sale of investment securities	75	
Gain on sale of equipment	(50)	
Increase in trading securities (including unrealized appreciation of $25)	(700)	
Increase in taxes payable	175	
Increase in interest receivable	(150)	
Increase in interest payable	75	
Decrease in fees and commissions receivable	20	
Increase in accrued expenses	55	
Total adjustment		(42)
Net cash provided by operating activities		$ 1,014
Supplemental schedule of noncash investing and financing activities:		
Conversion of long-term debt to common stock		$ 500

Lehman Brothers' statements of cash flows analysis (2005-2007)

Table 1 (Excerpt from Lehman Brothers' statement of cash flows – Appendix 2d)

Change in cash and cash equivalents (in millions of US$)	2007	2006	2005
Net change in cash and cash equivalents	$1,299	$1,087	($540)
Cash and cash equivalents, beginning of period	$5,987	$4,900	$5,440
Cash and cash equivalents, end of period	$7,286	$5,987	$4,900

On November 30, 2007 (9.5 months before the company went bankrupt), Lehman had $7.286 billion in cash and cash equivalents. The amount of cash is positive beginning in 2005, and increases every period (by about 22%). In addition, the net change in cash and cash equivalents is positive, namely $1.299 billion in 2007 and $1.087 billion in 2006. Therefore, the sole analysis of the evolution of the cash and cash equivalents between 2005 and 2007 and the amount of these items on November 30, 2007 cannot detect the bankruptcy that would occur on September 15, 2008.

Table 2 (Data taken or computed from Lehman Brothers' statement of cash flows – Appendix 2d)

Cash flows from operating activities (in millions of US$)	2007	2006	2005	*Total 2005-2007*
Net income	$4,192	$4,007	$3,260	
Funds provided by operations	$6,864	$6,123	$5,417	
Change in working capital	($52,459)	($42,499)	($17,622)	($112,580)
Financial instruments and other inventory positions owned	*($78,903)*	*($46,102)*	*($36,652)*	($161,657)
Net cash used in operating activities	($45,595)	($36,376)	($12,205)	($94,176)

Table 2 clearly shows that the operating cash flows are negative over a three-year period. In total, for the years 2005 to 2007, Lehman's operations "consumed" $94.176 billion. This "consumption" of cash practically tripled between 2005 and 2006 (from ($12.205 billion) to ($36.376 billion)). Between 2006 and 2007, 25% more cash was needed to sustain the company's operating activities (from ($36.376 billion) to ($45.595 billion)). Lehman, despite having considerable and increasing profits, shows a "chronic" incapacity (at least over these three years) to translate this performance into cash.

These insufficient cash flows resulting from operating activities were a very negative signal for users of financial statements. To extend the analysis, the cash flows from operating activities will be divided into two parts:

Cash flows from operating activities = Funds provided by operations + Change in working capital

Funds provided by operations: They are positive and increase slightly between 2005 and 2007 ($5,417 billion in 2005 to $6,864 billion in 2007). This is a positive signal because it indicates that Lehman had enough flexibility to invest in its working capital.

Change in working capital: Over a three-year period, Lehman's working capital literally swallowed $112.580 billion. This sharp increase in working capital has to be compensated for by the use of external financing. Closer scrutiny of the working capital sheds light on the weight of financial instruments. Between 2005 and 2007, Lehman found itself in a situation where it had to systematically pay out more than it deposited. Over a three-year period, $161.657 billion was allocated to these instruments. This breakdown is interesting because it shows that the deterioration of the cash situation is mainly caused by the management of working capital, and, more specifically, the position taken on these financial instruments. This section of the statement of cash flows clearly points to major failures in Lehman's performance.

Table 3 (Data taken or computed from Lehman Brothers' statement of cash flows – Appendix 2d)

Cash flows from investing activities (in millions of US$)	2007	2006	2005	*Total 2005-2007*
Free cash flow	($47,293)	($37,168)	($12,652)	($97,113)
Net cash used in investing activities	($1,698)	($792)	($447)	($2,937)

Lehman's main investments are in fixed assets and in business acquisitions. The fact that such investments increase between 2005 and 2007 ($447 million in 2005 to $1.698 billion in 2007) sent investors a positive signal about the company's growth prospects. Free cash flow, when negative, measures the financial resources a company needs to raise from its shareholders or creditors to meet the needs of its operating and investing activities. If the free cash flow after financial expenses is positive, the company can reduce its debt load, pay a dividend without contracting debt, or even set aside cash for future investments.

Free cash flow = Cash flows from operating activities + Cash flows from investing activities

In Lehman's case, it is clear that the negative free cash flow ($97.113 billion over three years) gave the company no choice but to use external financing to offset its cash flow operating deficit and to finance its investments. Only a policy of divestment would have limited the use of external financing. However it appears that such a policy was not adopted by Lehman.

Table 4 (Data taken or computed from Lehman Brothers' statement of cash flows – Appendix 2d)

Cash flows from financing activities (in millions of US$)	2007	2006	2005	*Total 2005-2007*
Issuance of long-term borrowings	**$86,302**	**$48,115**	**$23,705**	**$158,122**
Principal payments of long-term borrowings, including the current portion of long-term borrowings	***($46,255)***	***($19,636)***	***($14,233)***	**($80,124)**
Net cash flows provided by financing activities	**$48,592**	**$38,255**	**$12,112**	**$98,959**
Net cash flows used in operating activities	***($45,595)***	***($36,376)***	***($12,205)***	***($94,176)***

From 2005 to 2007, operating cash flow deficits were systematically and entirely financed by long-term loans. Over this three-year period, Lehman incurs an operating cash flows deficit of $94.176 billion. This deficit is financed through inflows of funds (mainly from long-term loans and some short-term loans) amounting to $98.959 billion. Interestingly, the cumulative value of the long-term loans taken over three years ($158.122 billion, see Table 4) is not far from the total amount invested in financial instruments over the same period ($161.657 billion, see Table 2).The above analysis clearly shows that Lehman has been financing its operating deficits by taking on considerable debt (over the long-term, no less). Lehman issued dividends of $302 million, $342 million and $418 million in 2005, 2006 and 2007 respectively, perhaps as a strategy to bolster the confidence of its shareholders. These dividends were paid from funds obtained through long-term loans, while operating activities were burning $94.176 billion in cash during the same period.

Lehman Brothers' statements of cash flows from 2005 to 2007 therefore contained many warning signs, which foreshadowed its eventual bankruptcy on September 15, 2008:

- Chronic cash flows deficits in operating activities ($94.176 billion over a three-year period);
- Systematic cash outflows at the working capital level ($112.580 billion over a three-year period):
  - Recurrent investments in financial instruments ($161.657 billion over a three-year period);
- Positive cash flows coming from financing activities ($98.959 billion over a three-year period);
- Long-term financing of recurrent cash flows deficits in operating activities;
- Payment of dividends (for three consecutive years) through long-term debt.

Application of the Altman model (1968) to Lehman Brothers (2005-2007)

Table 5 - Data taken or computed from Lehman Brothers' financial statements – Appendix 2c) 2d)

In millions of US$ (except %)	2005	2006	2007	Average	
Income statement					
Sales	32,420	46,709	59,003	46,044	
EBIT[50]	4,829	5,905	6,013	5,582	
Net income	3,260	3,960	4,192	3,804	
Balance sheet					
Current assets	398,319	491,801	677,669	522,596	
Total assets	410,063	503,545	691,063	534,890	
Retained earnings	12,198	15,857	19,698	15,918	
Current liabilities	324,303	381,764	516,060	407,376	
Total liabilities	393,269	484,354	668,573	515,399	
Other					
Market capitalization (Source: CorporateFocus)	24,370	34,891	35,593	31,618	
Automatic calculation					
ROA	*0.79%*	*0.79%*	*0.61%*	*0.73%*	
Working capital	*74,016.0*	*110,037.0*	*161,609.0*	*115,221*	
	2005	**2006**	**2007**	**Average**	**Coefficients**
X1	0.1805	0.2185	0.2339	0.2154	0.012
X2	0.0297	0.0315	0.0285	0.0298	0.014
X3	0.0118	0.0117	0.0087	0.0104	0.033
X4	0.0620	0.0720	0.0532	0.0613	0.006
X5	0.0791	0.0928	0.0854	0.0861	0.999
Z	**0.0823**	**0.0965**	**0.0891**	**0.0897**	
Threshold (1.81)	**Bankruptcy**	**Bankruptcy**	**Bankruptcy**	**Bankruptcy**	

Where:

	Numerator	Denominator
X1	Working capital	Total assets
X2	Retained earnings	Total assets
X3	EBIT	Total assets
X4	Market capitalization	Total liabilities
X5	Sales	Total assets

Applying the Altman model, one can observe that Lehman had been clearly sending signals of financial distress since 2005. The company's coefficients were well below 1.81 (Altman's threshold of financial distress) for the three years preceding bankruptcy; namely 0.0823 in 2005, 0.0965 in 2006, and 0.0891 in 2007. Financial distress was also translated by the average coefficient over these three years (0.0897). Lehman's results for the three years were positive and rising, a factor which automatically excludes variables X2, X3 and X5 as predictors of its future bankruptcy. Rather, it is variables X1 and X4 that signal the danger of Lehman's position. The massive investment in working capital ($112.580 billion, see analysis of statement of cash flows section) that Lehman made in the three years examined, along with the systematic financing of its operating cash deficit with loans ($98.959 billion, see analysis of statement of cash flows section) are red flags about the bank's viability.

Analysts' and rating agencies' opinions shortly before Lehman Brothers' bankruptcy (Appendix 3)

We could not get access to analysts' evaluations of Lehman in the years preceding the bankruptcy. However, by looking at public information, we could infer the analysts' perception of the company.

August 8, 2007 (13 months before bankruptcy):

- Lehman downgraded from *** to **
- Earnings per share slide by $0.21 (to $8.08)
- Estimated share price decreases by $17 (to $70, 19.5% lower than the estimated price of $87)

February 27, 2008 (6.5 months before bankruptcy):

- Lehman upgraded from ** to***
- Estimated earnings per share remain steady at $6.34
- Estimated share price increases by $10 (to $65, 18% higher than the estimated price of $55)

March 18, 2008 (6 months before bankruptcy):

- Analyst Albrecht changes recommendation on Lehman from SELL to HOLD.
- Lehman and Goldman Sachs are "applauded" by the markets for results obtained during the last quarter, despite the write-off of subprime loans.

Another sign:

- Standard & Poor's rated Lehman bonds A +. A stands for "upper quality" and + signals an appreciation in solvency (creditworthiness).
- 'AAA' (Triple A) is Standard & Poor's highest rating for bond debt. This rating indicates a very high capacity to pay the principal and interest on debt. The 'AA' rating is one notch lower, followed by 'A.'

IN CONCLUSION: Were the 2005-2007 statements of cash flows a reliable predictor of LEHMAN BROTHERS' bankruptcy?

In light of the above analysis, the following signs of financial distress were detectable in Lehman Brothers' financial statements:

- **Chronic inability to generate cash from operating activities;**
- **Massive and systematic investments in working capital items, and even more intensive investments in financial instruments;**
- **Systematic use of external financing (mainly long-term debt) to offset operating deficits;**
- **Steady deterioration of the cash situation over three consecutive years.**

Because Lehman posted net positive results and growth between 2005 and 2007,[51] these signs of distress were not visible in the income statement. Analysts made recommendations and predictions based on Lehman's estimated earnings per share. They therefore had their eyes riveted to the statement of income, which may explain why Lehman's cash flow situation did not cause any apparent concern. Rating agencies gave Lehman's debt a rating of A+ shortly before it went bankrupt. Therefore, the fact that Lehman systematically financed its operating cash deficits by contracting long-term debt (notably between 2005 and 2007) was not a worrisome factor for the rating agencies. When analyzed through the lens of the statements of cash flows, Lehman's financial distress becomes clearly visible. Our analysis signals major dysfunctions in working capital management. This is particularly striking for the financial instruments which generated, over a three-year period, net negative cash flows of $161.657 billion. The systematic payment of dividends despite sizeable cash deficits in operating activities, not to mention the financing of dividends through long-term loans, also points to dysfunctional cash management.

When using Altman prediction model, the company's coefficient was well below 1.81 (Altman's threshold of financial distress) for the three years preceding bankruptcy; namely 0.0823 in 2005, 0.0965 in 2006, and 0.0891 in 2007. It is worth stressing, however, that only two ratios (Working capital/Total assets and Market value of equity/Book value of total debt) make the difference. These two ratios highlight bad working capital management and the systematic use of debt to cover operating cash flows deficits. These problems would clearly stand out for anyone who analyses the statements of cash flows. In conclusion, we argue that Lehman Brothers' statements of cash flows for the years 2005, 2006, and 2007 were very strong predictors of its bankruptcy, which occurred on September 15, 2008. Because they emit clear signals of imminent financial distress starting from 2006, the statements of cash flows are highly informative and are thus of great value to investors and analysts.

Appendix 1
LEHMAN BROTHERS

Brief description of Lehman Brothers' activities and its principal risks

Business Summary

Excerpt from: the NetAdvantage - Standard & Poors website (April 2010)
(…) Lehman Brothers Holdings, Inc., through its subsidiaries, provides various financial services to corporations, governments and municipalities, institutions, and high-net-worth individuals worldwide. The company operates in three segments: Capital Markets, Investment Banking, and Investment Management. The Capital Markets segment represents institutional customer flow activities, including secondary trading, financing, mortgage origination and securitization, prime brokerage, and research activities in fixed income and equity products. It also offers equity and fixed income products, including U.S., European, and Asian equities; government and agency securities; money market products; corporate high grade securities; high yield and emerging market securities; mortgage- and asset-backed securities; preferred stock; municipal securities; bank loans; foreign exchange; and financing and derivative products. The Investment Banking segment provides advice to corporate, institutional, and government clients on mergers, acquisitions, and other financial matters. It also raises capital for clients by underwriting public and private offerings of debt and equity instruments. The Investment Management segment consists of private investment management, which provides investment, wealth advisory, and capital markets execution services to high net worth and middle market institutional clients; and asset management that provide customized investment management services for high net worth clients, mutual funds, and other small and middle market institutional investors. (…)

08-Apr-10• NASDAQ OTC-Other Symbol LEHMQ

(…)

Brief description of Lehman Brothers' activities and its principal risks

Business Risks
(Excerpts from Lehman Brothers' 2007 Annual Report)

(…) We are exposed to a variety of risks in the course of conducting our business operations. These risks, which are substantial and inherent in our businesses, include market, liquidity, credit, operational, legal and regulatory risks. (…) (p. 36)

(…) Our goal is to realize returns from our business commensurate with the risks assumed. Our business activities have inherent risks that we monitor, evaluate and manage through a comprehensive risk management structure. (…)

(…) The bases of our risk control processes are:

- We establish policies to document our risk principles, our risk capacity and tolerance levels.
- We monitor and enforce adherence to our risk policies.
- We measure quantifiable risks using methodologies and models based on tested assumptions.
- We identify emerging risks through monitoring our portfolios, new business development, unusual or complex transactions and external events and market influences.
- We report risks to stakeholders. (…) (p. 64)

Appendix 1

Main events in Lehman Brothers' history

"Lehman Brothers Holdings Inc. has filed for bankruptcy protection in the U.S."[52]

On September 15, 2008, Lehman Brothers Holdings, Inc along with its affiliates filed a voluntary petition for reorganization under Chapter 11 in the US Bankruptcy Court for the Southern District of New York, Manhattan.

Historical data below quoted from:
http://www.reuters.com/article/idUSHAR27520620080913 - April 2010 (Compiled by Phil Wahba; Editing by Jason Neely, Gary Hill)

1844: Henry Lehman, an immigrant from Germany, opens a small dry goods store in Montgomery, Alabama, in 1844.
1850: Henry is joined by brothers Emanuel and Mayer and they name the business Lehman Brothers.
1858: The Lehmans -- who take cotton from farmers to settle accounts and trade the cotton for money and merchandise -- open a New York office.
1887: Become members of the New York Stock Exchange
1929: The Lehman Corporation is created, a closed-end investment company.
1962: With Salomon Brothers, Merrill Lynch and Blyth and Company, Lehman forms an association nicknamed the "fearsome foursome" that challenges the major firms for underwriting business.
1972: Becomes one of the first investment banks to open an office in London to take advantage of the booming bond market in Europe.
1994: Lehman becomes independent through a public stock offering and Lehman Brothers Holding Inc common stock begins trading on the New York & Pacific stock exchanges.
2007: Lehman posts record-high net revenues, net income and earnings per common share (diluted) for a fourth consecutive year and the highest volume of trade on the London Stock Exchange for a third year in a row.

Appendix 1

Key declarations or actions by executives preceding Lehman Brothers' bankruptcy

Les Echos N°19337 January 26, 2005, p.33[53]

"Lehman Brothers prepared to buy back a quarter of its capital

Dividend. Lehman Brothers announced yesterday that it may buy up to 24% of its shares outstanding this year and increased its annual dividend by 25%, to 80¢ per share. This declaration was well received on Wall Street, where the American bank gained over 1% during the session. Lehman explained that its Board of Directors authorized the purchase of about 35 million shares in 2005, to offset dilution due to employee stock plans. "
(our translation)

Quoted from: Maiello, Michael. "Lehman Brothers" Forbes. New York: January 9, 2006. Vol. 177, Iss. 1; p. 110

"While competitors like JPMorgan Chase and Morgan Stanley have struggled to integrate former rivals, Lehman Brothers Holdings, the 151-year-old firm once known primarily as a bond house, has effortlessly diversified into growing capital markets products like mortgage-backed securities, collateralized debt obligations, derivatives, equity analysis, stock underwriting and wealth management. Chief Executive Richard S. Fuld Jr. accomplished this in iconoclastic style, relying on only one major acquisition, the $2.6 billion purchase of Neuberger Berman in October 2003. Lehman stock has returned 21% a year over the last five on earnings growth of 9%. Its economists recently forecast a 20% increase in merger and acquisition activity for the new year. If they're right, and 2006 outpaces the feverish 2005, then Lehman seems well positioned to make new gains."

1) (…)

Key declarations or actions by executives preceding Lehman Brothers' bankruptcy

"I am not worried about Wall Street, the competition between financial centres is healthy."[54] ***(our translation)***

RICHARD S. FULD CHAIRMAN AND CEO OF LEHMAN BROTHERS in an interview given to *Les Échos*, December 6, 2006

Quoted from: The Economist. London: April 26, 2008.
Vol. 387, Iss. 8577; p. 88

Fuld of experience - "By learning from past mistakes, Dick Fuld has brought Lehman Brothers back from the brink"

"Smart risk management is never putting yourself in a position where you can't live to fight another day," says Mr Fuld. (…)

(…) Mr Fuld says he is "thrilled" with Lehman's response to the latest crisis. It now has almost $200 billion of liquidity and collateral that can be readily turned into cash. That may just be enough to see off the shorts. But it is not out of the woods yet. It is still sitting on $87 billion of troubled, hard-to-sell assets, many of which could continue to lose value. Mr Fuld will be particularly annoyed at having "substituted capital for wits" in building up a $55 billion book of leveraged loans, says Peter Solomon, a former Lehman vice-chairman (and a big admirer). 'He got talked into following the crowd in an area he wasn't so familiar with. Left to his own devices, he wouldn't have got in so deep.' For Wall Street as a whole, lower leverage and the need to service more capital will usher in an era of lower profitability. It could wipe five percentage points off returns on equity for years, reckon analysts at Bank of America. (…)

(…) It was once said that Lehman under Dick Fuld was a cat with 19 lives. They have not all been used up yet."

Appendix 2
2a)
Selected Financial Data

Lehman Brothers 2007 Annual Report: UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549. Form 10-K - Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended November 30, 2007. Web site:
http://moneycentral.msn.com/investor/sec/filing.asp?Symbol=US%3aLEHMQ

ITEM 6. SELECTED FINANCIAL DATA

	As of or for the Year Ended November 30,				
	2007	2006	2005	2004	2003
Consolidated Statement of Income (in millions)					
Total revenues	$ 59,003	$ 46,709	$ 32,420	$ 21,250	$ 17,287
Interest expense	39,746	29,126	17,790	9,674	8,640
Net revenues	19,257	17,583	14,630	11,576	8,647
Non-interest expenses:					
Compensation and benefits	9,494	8,669	7,213	5,730	4,318
Non-personnel expenses (1)	3,750	3,009	2,588	2,309	1,716
Real estate reconfiguration charge	—	—	—	19	77
Total non-interest expenses	13,244	11,678	9,801	8,058	6,111
Income before taxes and cumulative effect of accounting change	6,013	5,905	4,829	3,518	2,536
Provision for income taxes	1,821	1,945	1,569	1,125	765
Dividends on trust preferred securities (2)	—	—	—	24	72
Income before cumulative effect of accounting change	4,192	3,960	3,260	2,369	1,699
Cumulative effect of accounting change	—	47	—	—	—
Net income	$ 4,192	$ 4,007	$ 3,260	$ 2,369	$ 1,699
Net income applicable to common stock	$ 4,125	$ 3,941	$ 3,191	$ 2,297	$ 1,649
Consolidated Statement of Financial Condition (in millions)					
Total assets	$ 691,063	$ 503,545	$ 410,063	$ 357,168	$ 312,061
Net assets (3) (10)	372,959	268,936	211,424	175,221	163,182
Long-term borrowings (2) (4)	123,150	81,178	53,899	49,365	35,885
Preferred securities subject to mandatory redemption (2)	—	—	—	—	1,310
Total stockholders' equity	22,490	19,191	16,794	14,920	13,174
Tangible equity capital (5) (10)	23,103	18,567	15,564	12,636	10,681
Total long-term capital (6)	145,640	100,369	70,693	64,285	50,369
Per Common Share Data (in millions, except per share amounts) (7)					
Earnings per share:					
Basic	$ 7.63	$ 7.26	$ 5.74	$ 4.18	$ 3.36
Diluted	$ 7.26	$ 6.81	$ 5.43	$ 3.95	$ 3.17
Weighted average common shares outstanding:					
Basic	540.6	543.0	556.3	549.4	491.3
Diluted	568.3	578.4	587.2	581.5	519.7

	As of or for the Year Ended November 30,				
	2007	2006	2005	2004	2003
Dividends declared and paid per common share	$ 0.60	$ 0.48	$ 0.40	$ 0.32	$ 0.24
Book value per common share (8)	$ 39.44	$ 33.87	$ 28.75	$ 24.66	$ 22.09
Selected Data					
Leverage ratio (9)	30.7x	26.2x	24.4x	23.9x	23.7x
Net leverage ratio (10)	16.1x	14.5x	13.6x	13.9x	15.3x
Employees	28,556	25,936	22,919	19,579	16,188
Assets under management (in billions)	$ 282	$ 225	$ 175	$ 137	$ 120
Financial Ratios					
Compensation and benefits/net revenues	49.3%	49.3%	49.3%	49.5%	49.9%
Pre-tax margin	31.2%	33.6%	33.0%	30.4%	29.3%
Return on average common stockholders' equity (11)	20.8%	23.4%	21.6%	17.9%	18.2%
Return on average tangible common stockholders' equity (11)	25.7%	29.1%	27.8%	24.7%	19.2%

Notes to Selected Financial Data:

(1) Non-personnel expenses exclude real estate reconfiguration charges of $19 million and $77 million for the years ended November 30, 2004 and 2003, respectively.

(2) We adopted FIN 46(R) effective February 29, 2004, which required us to deconsolidate the trusts that issued the preferred securities. Accordingly, at and subsequent to February 29, 2004, preferred securities subject to mandatory redemption were reclassified to junior subordinated notes, a component of long-term borrowings. Dividends on preferred securities subject to mandatory redemption, which were presented as Dividends on trust preferred securities in the Consolidated Statement of Income through February 29, 2004, are included in Interest expense in periods subsequent to February 29, 2004.

(3) We calculate net assets by excluding from total assets: (i) cash and securities segregated and on deposit for regulatory and other purposes; (ii) collateralized lending agreements; and (iii) identifiable intangible assets and goodwill. We believe net assets to be a more useful measure of our assets than total assets because it excludes certain low-risk, non-inventory assets. Net assets as presented are not necessarily comparable to similarly-titled measures provided by other companies in the securities industry because of different methods of presentation.

	At November 30,				
In millions	**2007**	**2006**	**2005**	**2004**	**2003**
Total assets	$ 691,063	$ 503,545	$ 410,063	$ 357,168	$ 312,061
Cash and securities segregated and on deposit for regulatory and other purposes	(12,743)	(6,091)	(5,744)	(4,085)	(3,100)
Collateralized lending agreements	(301,234)	(225,156)	(189,639)	(174,578)	(142,218)
Identifiable intangible assets and goodwill	(4,127)	(3,362)	(3,256)	(3,284)	(3,561)
Net assets	$ 372,959	$ 268,936	$ 211,424	$ 175,221	$ 163,182

(4) Long-term borrowings exclude borrowings with remaining contractual maturities within twelve months of the financial statement date.

(5) We calculate tangible equity capital by including stockholders' equity and junior subordinated notes (at November 30, 2003, preferred securities subject to mandatory redemption), and excluding identifiable intangible assets and goodwill. See "MD&A—Liquidity, Funding and Capital Resources—Balance Sheet and Financial Leverage" for additional information about tangible equity capital. We believe tangible equity capital to be a more meaningful measure of our equity base as it includes instruments we consider to be equity-like due to their subordinated nature, long-term maturity and interest deferral features and excludes assets we do not consider available to support our remaining net assets (see note 3 above). These measures may not be comparable to other, similarly titled calculations by other companies as a result of different calculation methodologies.

	At November 30,				
In millions	**2007**	**2006**	**2005**	**2004**	**2003**
Total stockholders' equity	$ 22,490	$ 19,191	$ 16,794	$ 14,920	$ 13,174
Junior subordinated notes (subject to limitation) (a) (b)	4,740	2,738	2,026	1,000	1,068
Identifiable intangible assets and goodwill	(4,127)	(3,362)	(3,256)	(3,284)	(3,561)
Tangible equity capital	$ 23,103	$ 18,567	$ 15,564	$ 12,636	$ 10,681

(a) Preferred securities subject to mandatory redemption at November 30, 2003.

(b) Our definition for tangible equity capital limits the amount of junior subordinated notes and preferred stock included in the calculation to 25% of tangible equity capital. The amount excluded was approximately $237 million at November 30, 2007. No amounts were excluded in prior periods.

(6) Total long-term capital includes long-term borrowings (excluding any borrowings with remaining contractual maturities within twelve months of the financial statement date) and total stockholders' equity and, at November 30, 2003, preferred securities subject to mandatory redemption. We believe total long-term capital is useful to investors as a measure of our financial strength.

(7) Common share and per share amounts have been retrospectively adjusted to give effect for the 2-for-1 common stock split, effected in the form of a 100% stock dividend, which became effective April 28, 2006.

(8) The book value per common share calculation includes amortized restricted stock units granted under employee stock award programs, which have been included in total stockholders' equity.

(9) Leverage ratio is defined as total assets divided by total stockholders' equity.

(10) Net leverage ratio is defined as net assets (see note 3 above) divided by tangible equity capital (see note 5 above). We believe net leverage based on net assets and tangible equity capital to be a more meaningful measure of leverage as net assets excludes certain low-risk, non-inventory assets and we believe tangible equity capital to be a more meaningful measure of our equity base. Net leverage as presented is not necessarily comparable to similarly-titled measures provided by other companies in the securities industry because of different methods of presentation.

(11) Return on average common stockholders' equity is computed by dividing net income applicable to common stock for the period by average common stockholders' equity. Return on average tangible common stockholders' equity is computed by dividing net income applicable to common stock for the period by average tangible common stockholders' equity. Average tangible common stockholders' equity equals average total common stockholders' equity less average identifiable intangible assets and goodwill. We believe tangible common stockholders' equity is a meaningful measure because it reflects the common stockholders' equity deployed in our businesses. Average common stockholders' equity, Average identifiable intangible assets and goodwill and Average tangible common stockholders' equity are calculated as:

	As of or for the Year Ended November 30,				
In millions	**2007**	**2006**	**2005**	**2004**	**2003**
Net income applicable to common stock	$ 4,125	$ 3,941	$ 3,191	$ 2,297	$ 1,649
Average stockholders' equity	$ 20,910	$ 17,971	$ 15,936	$ 14,059	$ 9,899
Less: average preferred stock	(1,095)	(1,095)	(1,195)	(1,217)	(838)
Average common stockholders' equity	$ 19,815	$ 16,876	$ 14,741	$ 12,842	$ 9,061
Less: average identifiable intangible assets and goodwill	(3,756)	(3,312)	(3,272)	(3,547)	(471)
Average tangible common stockholders' equity	$ 16,059	$ 13,564	$ 11,469	$ 9,295	$ 8,590
Return on average common stockholders' equity	20.8%	23.4%	21.6%	17.9%	18.2%
Return on average tangible common stockholders' equity	25.7%	29.1%	27.8%	24.7%	19.2%

2b) (…)
Statement of Income
LEHMAN BROTHERS HOLDINGS INC.
Consolidated Statement of Income

	Year Ended November 30,		
In millions, except per share data	**2007**	**2006**	**2005**
Revenues			
Principal transactions	$ 9,197	$ 9,802	$ 7,811
Investment banking	3,903	3,160	2,894
Commissions	2,471	2,050	1,728
Interest and dividends	41,693	30,284	19,043
Asset management and other	1,739	1,413	944
Total revenues	59,003	46,709	32,420
Interest expense	39,746	29,126	17,790
Net revenues	19,257	17,583	14,630
Non-Interest Expenses			
Compensation and benefits	9,494	8,669	7,213
Technology and communications	1,145	974	834
Brokerage, clearance and distribution fees	859	629	548

Occupancy	641	539	490
Professional fees	466	364	282
Business development	378	301	234
Other	261	202	200
Total non-personnel expenses	3,750	3,009	2,588
Total non-interest expenses	13,244	11,678	9,801
Income before taxes and cumulative effect of accounting change	6,013	5,905	4,829
Provision for income taxes	1,821	1,945	1,569
Income before cumulative effect of accounting change	4,192	3,960	3,260
Cumulative effect of accounting change	—	47	—
Net income	$ 4,192	$ 4,007	$ 3,260
Net income applicable to common stock	$ 4,125	$ 3,941	$ 3,191
Earnings per basic common share:			
Before cumulative effect of accounting change	$ 7.63	$ 7.17	$ 5.74
Cumulative effect of accounting change	—	0.09	—
Earnings per basic common share	$ 7.63	$ 7.26	$ 5.74
Earnings per diluted common share:			
Before cumulative effect of accounting change	$ 7.26	$ 6.73	$ 5.43
Cumulative effect of accounting change	—	0.08	—
Earnings per diluted common share	$ 7.26	$ 6.81	$ 5.43
Dividends paid per common share	$ 0.60	$ 0.48	$ 0.40

See Notes to Consolidated Financial Statements.

2c) (…)

Statement of Financial Condition

LEHMAN BROTHERS HOLDINGS INC.

Consolidated Statement of Financial Condition

	November 30,	
In millions	**2007**	**2006**
Assets		
Cash and cash equivalents	$ 7,286	$ 5,987
Cash and securities segregated and on deposit for regulatory and other purposes	12,743	6,091
Financial instruments and other inventory positions owned (includes $63,499 in 2007 and $42,600 in 2006 pledged as collateral)	313,129	226,596
Collateralized agreements:		
Securities purchased under agreements to resell	162,635	117,490
Securities borrowed	138,599	107,666
Receivables:		
Brokers, dealers and clearing organizations	11,005	7,449
Customers	29,622	18,470
Others	2,650	2,052
Property, equipment and leasehold improvements (net of accumulated depreciation and amortization of $2,438 in 2007 and $1,925 in 2006)	3,861	3,269
Other assets	5,406	5,113
Identifiable intangible assets and goodwill (net of accumulated amortization of $340 in 2007 and $293 in 2006)	4,127	3,362
Total assets	$ 691,063	$ 503,545

See Notes to Consolidated Financial Statements.

2c) (…)
Statement of Financial Condition (…)
LEHMAN BROTHERS HOLDINGS INC.
Consolidated Statement of Financial Condition—(Continued)

In millions, except share data	November 30, 2007	November 30, 2006
Liabilities and Stockholders' Equity		
Short-term borrowings and current portion of long-term borrowings (including $9,035 in 2007 and $6,064 in 2006 at fair value)	$ 28,066	$ 20,638
Financial instruments and other inventory positions sold but not yet purchased	149,617	125,960
Collateralized financings:		
Securities sold under agreements to repurchase	181,732	133,547
Securities loaned	53,307	23,982
Other secured borrowings (including $9,149 in 2007 and $0 in 2006 at fair value)	22,992	19,028
Payables:		
Brokers, dealers and clearing organizations	3,101	2,217
Customers	61,206	41,695
Accrued liabilities and other payables	16,039	14,697
Deposit liabilities at banks (including $15,986 in 2007 and $14,708 in 2006 at fair value)	29,363	21,412
Long-term borrowings (including $27,204 in 2007 and $11,025 in 2006 at fair value)	123,150	81,178
Total liabilities	668,573	484,354
Commitments and contingencies		
Stockholders' Equity		
Preferred stock	1,095	1,095
Common stock, $0.10 par value:		
Shares authorized: 1,200,000,000 in 2007 and 2006;		
Shares issued: 612,882,506 in 2007 and 609,832,302 in 2006;		
Shares outstanding: 531,887,419 in 2007 and 533,368,195 in 2006	61	61
Additional paid-in capital [(1)]	9,733	8,727
Accumulated other comprehensive loss, net of tax	(310)	(15)
Retained earnings	19,698	15,857
Other stockholders' equity, net	(2,263)	(1,712)
Common stock in treasury, at cost [(1)] (80,995,087 shares in 2007 and 76,464,107 shares in 2006)	(5,524)	(4,822)
Total common stockholders' equity	21,395	18,096
Total stockholders' equity	22,490	19,191
Total liabilities and stockholders' equity	$ 691,063	$ 503,545

(1) Balances and share amounts at November 30, 2006 reflect the April 28, 2006 2-for-1 common stock split, effected in the form of a 100% stock dividend.

See Notes to Consolidated Financial Statements.

2d) (…)
Statement of Cash Flows
LEHMAN BROTHERS HOLDINGS INC.
Consolidated Statement of Cash Flows

In millions	Year Ended November 30, 2007	2006	2005
Cash Flows From Operating Activities			
Net income	$ 4,192	$ 4,007	$ 3,260
Adjustments to reconcile net income to net cash used in operating activities:			
Depreciation and amortization	577	514	426
Non-cash compensation	1,791	1,706	1,055
Cumulative effect of accounting change	—	(47)	—
Deferred tax provision/(benefit)	418	(60)	(502)
Tax benefit from the issuance of stock-based awards	—	—	1,005
Other adjustments	(114)	3	173
Net change in:			
Cash and securities segregated and on deposit for regulatory and other purposes	(6,652)	(347)	(1,659)
Financial instruments and other inventory positions owned	(78,903)	(46,102)	(36,652)
Resale agreements, net of repurchase agreements	3,039	6,111	(475)
Securities borrowed, net of securities loaned	(1,608)	(18,383)	(5,165)
Other secured borrowings	3,964	(4,088)	11,495
Receivables from brokers, dealers and clearing organizations	(3,556)	5	(4,054)
Receivables from customers	(11,152)	(5,583)	354
Financial instruments and other inventory positions sold but not yet purchased	23,415	15,224	14,156
Payables to brokers, dealers and clearing organizations	884	347	165
Payables to customers	19,511	9,552	4,669
Accrued liabilities and other payables	302	2,032	(801)
Other receivables and assets and minority interests	(1,703)	(1,267)	345
Net cash used in operating activities	(45,595)	(36,376)	(12,205)
Cash Flows From Investing Activities			
Purchase of property, equipment and leasehold improvements, net	(966)	(586)	(409)
Business acquisitions, net of cash acquired	(965)	(206)	(38)
Proceeds from sale of business	233	—	—
Net cash used in investing activities	(1,698)	(792)	(447)
Cash Flows From Financing Activities			
Derivative contracts with a financing element	242	159	140
Tax benefit from the issuance of stock-based awards	434	836	—
Issuance of short-term borrowings, net	3,381	4,819	84
Deposit liabilities at banks	7,068	6,345	4,717
Issuance of long-term borrowings	86,302	48,115	23,705
Principal payments of long-term borrowings, including the current portion of long term borrowings	(46,255)	(19,636)	(14,233)
Issuance of common stock	84	119	230
Issuance of treasury stock	359	518	1,015
Purchase of treasury stock	(2,605)	(2,678)	(2,994)
Retirement of preferred stock	—	—	(250)
Dividends paid	(418)	(342)	(302)
Net cash provided by financing activities	48,592	38,255	12,112

	Year Ended November 30, 2007	2006	2005
Net change in cash and cash equivalents	1,299	1,087	(540)
Cash and cash equivalents, beginning of period	5,987	4,900	5,440
Cash and cash equivalents, end of period	$ 7,286	$ 5,987	$ 4,900
Supplemental Disclosure of Cash Flow Information (in millions):			
Interest paid totaled $39,454, $28,684 and $17,893 in 2007, 2006 and 2005, respectively.			
Income taxes paid totaled $1,476, $1,037 and $789 in 2007, 2006 and 2005, respectively.			

See Notes to Consolidated Financial Statements.

Appendix 2e

Lehman's stock price and ratios

Chart LEHMQ.PK

Excerpt from: http://finance.yahoo.com/q/ta?s=LEHMQ.PK&t=5y&l=on&z=m&q=l&p=&a=&c= (Avril 2010)

2e) (…)

Lehman's stock price and ratios

Ratios (Lehman Brothers) (2000 – 2007)

Excerpt from:
http://moneycentral.msn.com/investor/invsub/results/compare.asp?Page=TenYearSummary&Symbol=US%3aLEHMQ

Lehman Brothers Holdings Ord Shs: Key Ratios

	Avg P/E	Price/ Sales	Price/ Book	Net Profit Margin (%)
11/07	9.70	0.60	1.48	7.0
11/06	10.30	0.91	2.05	8.3
11/05	9.20	1.14	2.04	9.8
11/04	9.90	1.15	1.54	10.8
11/03	10.10	1.09	1.33	9.5
11/02	17.20	0.96	1.47	5.4
11/01	15.80	0.78	1.71	5.2
11/00	7.80	0.50	1.36	6.3

	Book Value/ Share	Debt/ Equity	Return on Equity (%)	Return on Assets (%)	Interest Coverage
11/07	$42.28	7.02	18.6	0.6	0.2
11/06	$35.98	5.77	20.6	0.8	0.2
11/05	$30.94	4.42	19.4	0.8	0.3
11/04	$27.21	4.71	16.0	0.7	0.4
11/03	$27.16	3.57	12.2	0.6	0.3
11/02	$20.88	5.18	10.7	0.4	0.1
11/01	$19.30	5.32	14.3	0.5	0.1
11/00	$18.28	5.34	21.2	0.8	0.1

Appendix 3
Analysts' and rating agencies' opinions shortly before Lehman Brothers bankruptcy

Quoted from: The Outlook - Intelligence for the Individual Investor
August 8, 2007 - Volume 79 - Number 30, p.3 **(Standard & Poor's)**

FALLING STARS
Lehman Brothers LEH 61
To ** From ***
We believe Lehman Brothers remains highly leveraged to its fixed income business, which is facing a number of challenges. We expect mortgage origination and securitization volume to slow during the second half of fiscal 2007 (ending November). We lowered our fiscal 2007 earnings estimate by $0.21 to $8.08 a share. We also cut our target price by $17 to $70."

Quoted from: The Outlook - Intelligence for the Individual Investor
February 27, 2008 - Volume 80 - Number 9, p.3 **(Standard & Poor's)**

One to Watch **LEHMAN** (LEH)
Lehman LEH 54
To * From ****

We believe Lehman Brothers is better positioned than many of its peers in this difficult operating environment. It has lower exposure than peers to municipal bond insurers, leveraged loan commitments, and collateralized debt obligations. The exposure it does have, as well as other residential and commercial mortgage holdings, may lead to some valuation adjustments in coming quarters, but we believe the magnitude of writedowns will be small relative to peers. We kept our fiscal 2008 (ending November) earnings estimate at $6.34 a share, but we raised our target price by $10 to $65, which is 1.5 times our 12-month projected book value.

3) (…)
Analysts' and rating agencies' opinions shortly before Lehman Brothers bankruptcy

Quoted from: The Outlook - Intelligence for the Individual Investor
March 26, 2008 - Volume 80 - Number 13, p. 4. (Standard & Poor's)

Financials in Flux
Bear Stearns and JPMorgan joined hands, while Goldman, Lehman, and Morgan Stanley reported quarterly results that nevertheless rallied the markets. (…)

On March 18, investors anxiously awaited quarterly results from Goldman Sachs (GS 166 ★★★★) and, in particular, LEHMAN Brothers (LEH 42 ★★★), which has been the subject of speculation as to its financial health.

Despite recording writedowns related to subprime mortgage debt, the market cheered Goldman Sachs' and LEHMAN's results, sending shares in the financial sector sharply higher.

Both investment banks reported about $2 billion apiece in writedowns. However, in both cases, profits came in ahead of consensus expectations.

Goldman's profits declined more than 50% to $1.5 billion, or $3.23 a share. Of the $2 billion in losses it reported, about $1 billion was related to residential mortgage loans. S&P expected per-share earnings of $2.82. Strong asset management and securities services revenues offset declines in investment banking and trading operations.

Though the company's investment banking backlog has weakened, the decline is consistent with what the firm's peers are experiencing, Albrecht says.

LEHMAN reported a 57% decrease in earnings to $489 million, or 81 cents a share. On a net basis, mark-to-market losses of $1.8 billion for mortgage positions and lending commitments were recorded in the quarter.

On March 18, Albrecht upgraded his sell recommendation on LEHMAN to hold. Strength in investment banking and investment management offset the writedowns in the capital markets business.

"LEHMAN is considered Bear Stearns' closest cousin on Wall Street, and investors have been invoking the 1998 liquidity squeeze that battered LEHMAN as a reason to bail on the stock," Albrecht says. "Like Bear, LEHMAN is a big bond player and also one of the smaller Wall Street firms, though many investors considered it on sturdier ground than Bear."

LEHMAN said on March 18 it has a $34 billion liquidity pool and unencumbered assets of $64 billion.

On March 19, Morgan Stanley (MS 46 ★★) reported smaller-than expected mortgage and loan write downs of $2.3 billion, which allowed the firm to best S&P's earnings expectation. Though results from the asset management business were weak, wealth management reported another strong quarter.

3) (…)
Analysts' and rating agencies' opinions shortly before Lehman Brothers bankruptcy

S&P Bond Rating – Lehman Brothers

Bond Reports - Standard & Poor's			
Company Name	Issue Description	Maturity Date (MM/DD/YYYY)	S&P Bond Rating
Lehman Brothers Holdings	Nts	01/22/2008	A+
Lehman Brothers Holdings	Nts	05/15/2007	A+
Lehman Brothers Holdings	Stk-LinkedNts	06/01/2008	A+
Lehman Brothers Holdings	Nts	02/24/2007	A+
Lehman Brothers Holdings	Nts	06/15/2007	A+
Lehman Brothers Holdings	Nts	05/01/2007	A+
Lehman Brothers Holdings	Sub Nt	01/03/2017	NR
Lehman Brothers Holdings	Linked Ishares S&p Gbl MTN Ser	10/12/2011	NR
Lehman Brothers Holdings	Stk-LinkedNts	06/19/2009	NR
Lehman Brothers Holdings	Stk-LinkedNts	05/13/2010	NR
Lehman Brothers Holdings	Nts	11/01/2009	NR
Lehman Brothers Holdings	Sr Nt	03/01/2015	NR
Lehman Brothers Holdings	Nt	08/15/2010	NR
Lehman Brothers Holdings	Nts	08/15/2009	NR
Lehman Brothers Holdings	Sr Nt	08/01/2015	NR
NR : non rated			

3) (…)
Analysts' and rating agencies' opinions shortly before Lehman Brothers bankruptcy

CREDIT RATING

Standard & Poor's, Moody's, and Fitch Investors Service assign credit ratings to corporate debt, municipal debt, and other fixed income securities. An 'AAA' (Triple A) rating is the highest rating assigned by Standard & Poor's to a debt obligation. It indicates an extremely strong capacity to pay principal and interest. Bonds rated 'AA' are just a notch below, then single 'A', then 'BBB', and so on. Some ratings show a + or - to further differentiate creditworthiness.

Bonds rated 'BBB' and above are considered investment grade, a category to which certain investors, including many pension funds, confine their bond holdings. Bonds rated 'BB', 'B', 'CCC', 'CC', and 'C' are regarded, on balance, as predominantly speculative. A bond rating of 'D' indicates payment default or the filing of a bankruptcy petition.

Bond issuers pay credit rating agencies to rate an issue. Once a rating is assigned, it is regularly reviewed by the credit rating agency.

Credit Ratings Used by the Credit Ratings Agencies			
Investment Grade	**Standard & Poor's**	**Moody's**	**Fitch**
Highest Quality	AAA	Aaa	AAA
High Quality	AA	Aa	AA
Upper Quality	A	A	A
Medium Upper Quality	BBB	Baa	BBB
Speculative Grade			
Speculative	<BB< TD>	Ba	BB
B	B	B	
CCC	Caa	CCC	
CC	Ca	CC	
C	C	C	
Default	D	-	DDD

[1] This report, which is hereto referred to as the Valukas report, is described in footnote 21.
[2] Altman, E.I., 1968, ''Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy," Journal of Finance, Vol.23, No.4, 589-609.
[3] Altman, E.I., 1968, ''Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy," Journal of Finance, Vol.23, No.4, 589-609.
[4] **Armageddon** (from the Hebrew: **ודיגמ** רה, meaning "Mountain of Megiddo," a hill in Palestine), is a term mentioned in the New Testament that refers to a symbolic battleground, where a final combat between Good and Evil occurred. In modern usage the term has become synonymous with any cataclysmic event. (Source: Wikipedia.org)
[5] Source: Why Wall Street could go to jail (Fortune), January 6, 2009
http://money.cnn.com/galleries/2008/fortune/0812/gallery.parloff_quotes.fortune/index.html**.**
[6] Information taken from: Why Wall Street could go to jail (Fortune) – January 6, 2009 online at:
http://money.cnn.com/galleries/2008/fortune/0812/gallery.parloff quotes.fortune/index.html
[7] Information taken from: Why Wall Street could go to jail (Fortune) – January 6, 2009 online at:
http://money.cnn.com/galleries/2008/fortune/0812/gallery.parloff quotes.fortune/index.html.
[8] Collomp, Florentin. 2010. "Comment Lehman maquillait ses bilans." Le Figaro- Économie, France, Saturday, March 13, p. 24.
[9] Source: LeMonde.fr – April 17, 2010 - Goldman Sachs poursuivie pour fraude par la SEC pour duplicité – website:
http://finance.blog.lemonde.fr/2010/04/17/goldman-sachs-poursuivie-pour-fraude-par-la-sec-pour-duplicite/.
[10] Pressman, Aaron and Joseph Giannone. 2010. "Goldman Sachs pourrait ne pas être un cas isolé," Le nouvelObs.com, April 18, website: http://tempsreel.nouvelobs.com/actualite/economie
/20100418.REU6668/goldman-sachs-pourrait-ne-pas-etre-un-cas-isole.html
[11] Source: Connecticut Attorney General's Office - Press Release – "Attorney General Condemns Alleged Goldman Sachs Scam" **-** April 16, 2010 - http://www.ct.gov/ag/cwp/view.asp?A=2341&Q=458956.
[12] The original quote read: "On se dit que l'Amérique déraille. En fait, elle se cherche des coupables : dirigeants devenus 'étatistes' dilapidant l'argent public, banquiers 'corrompus' …" Taken from: Cypel, Sylvain. 2008. «Les États-Unis se cherchent des coupables». Le Monde – Éditorial et analyse, France, Monday, October 13, 2008, p. 2.
[13] Cypel. 2008. Op. cit.
[14] Cohan, William D. 2009. "Rating McGraw-Hill." Fortune Magazine. April 17, 2009
http://money.cnn.com/2009/04/16/news/companies/cohan_mcgraw.fortune/index2.htm.
[15] Bonazza, Patrick and Mélanie Delattre. 2008. "La crise financière arrive en France," Le Point, France, Thursday, October 2, p. 36.
[16] Bliman, Marianne and Julie Carceller. 2007. Dossier: "Subprime": explications d'une crise, Les Echos.fr, Information taken from the website: http://www.lesechos.fr/info/finance/300194636.htm 26/12/07 - 11H32 - updated at 11:57:00.
[17] Bliman and Carceller. 2007. Op. cit.
[18] Bliman and Carceller. 2007. Op. cit.
[19] Couderc, Nicolas. 2008. "Titrisation, incitations et transparence," in *La Crise des Subprimes*, Rapport
Patrick Artus, Jean-Paul Betbèze, Christian de Boissieu and Gunther Capelle-Blancard, Complément C, p. 191-202, La Documentation française, Paris**.**
[20] Couderc. 2008. Op. cit.
[21] Bonazza and Delattre. 2008. Op. cit.
[22] UNITED STATES BANKRUPTCY COURT, SOUTHERN DISTRICT OF NEW YORK, In re LEHMAN BROTHERS HOLDINGS INC., et al., Debtors, Chapter 11, Case No. 08-13555 (JMP) (Jointly Administered) - REPORT OF ANTON R. VALUKAS, EXAMINER, March 11, 2010. Hereafter called "Valukas Report."
This report contains the following nine volumes:
Volume 1- Sections I & II: Introduction, Executive Summary & Procedural Background; Section III.A.1: Risk
Volume 2- Section III.A.2: Valuation; Section III.A.3: Survival
Volume 3- Section III.A.4: Repo 105
Volume 4- Section III.A.5: Secured Lenders; Section III.A.6: Government
Volume 5- Section III.B: Avoidance Actions; Section III.C: Barclays Transaction
Volume 6- Appendix 1
Volume 7- Appendices 2 - 7
Volume 8- Appendices 8 - 22
Volume 9- Appendices 23 - 34
[23] "Repurchase Agreement ('Repo'): Agreements where one party transfers an asset or security to another party as collateral for a short-term borrowing of cash, while simultaneously agreeing to repay the cash and take back the collateral at a specific point in time. When the repo transaction matures, the borrower repays the funds plus an agreed upon interest rate and takes back its collateral" (definition found on page 76 – volume 7 – Valukas Report, see footnote 21).
[24] De Gasquet, Pierre. 2010, "Un rapport d'enquête dénonce les artifices comptables de Lehman avant sa faillite," Les Échos, Finance, Monday, March 15, p. 28.
[25] Valukas report, p. 16 – volume 1.
[26] The Public Company Accounting Oversight Board (PCAOB) has recently launched an investigation into Lehman's audit after the publication of Valukas Report. The PCAOB has been created after the accounting scandals at Enron and Worldcom by the Sarbanes-Oxley

act of 2002 and has the power to oversee auditors of public companies in the United States. The PCAOB sent a second major communication to auditors on April 7, 2010 in order to address concerns about the role of the Lehman Brothers' auditors (Ernst & Young) in the bank's collapse. Ernst & Young has refuted these accusations. - Information taken from the website http://www.reuters.com/article/idUSN0710358220100407 - Chasan, Emily. 2010. "US watchdog reminds auditors to watch unusual deals" - Reuters – April 8.

[27] Valukas report, p. 7-8 – Volume 1.

[28] De Gasquet, 2010, op. cit.

[29] Freifeld, Karen and Linda Sandler. 2010. "Ernst & Young Said to Face Fraud Lawsuit From Cuomo Over Lehman Audits". Bloomberg, December 20. Information taken from the website (January 12th, 2011): http://www.bloomberg.com/news/2010-12-20/ernst-young-said-to-face-fraud-lawsuit-from-cuomo-over-lehman-audits.html.

[30] Valukas report, p. 76 – Volume 7.

[31] Collomp, 2010, op. cit.

[32] De Gasquet, 2010, op. cit.

[33] Quoted from: The Economist. 2010, "Finance And Economics : Beancounters in a bind ; The Lehman report," The Economist, March 20, 2010, Vol. 394, Iss. 8674, p.81.

[34] Artus, Patrick, Jean-Paul Betbèze, Christian de Boissieu et Gunther Capelle-Blancard. 2008. *La Crise des Subprimes - Rapport*, chapitre 2 (p. 63-102) 'Le déroulement de la crise et ses effets', La Documentation française, Paris, p. 70.

[35] Senate and House of Representatives of the United States of America in Congress assembled, 2002, Sarbanes-Oxley Act.

[36] See footnote 21 for a description of the report. The quote is taken from Volume 1, p. 2-3. The reference numbers to footnotes have been removed by the authors.

[37] Lee, Cheng Few & Alice C. Lee (2006). Financial Distress. In *Encyclopedia of Finance* (p.119). New York: Springer Science + Business Media, Inc.

[38] Beaver, William H., (1966). "Financial Ratios as Predictors of Failure," Journal of Accounting Research, Supplement, Empirical Research in Accounting: Selected Studies, 71-111.

[39] Altman, E.I., 1968, "Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy," Journal of Finance, Vol.23, No.4, 589-609.

[40] Wagner, Victoria. 2006. "S&P Credit Market Services View: Evaluating a commercial bank's credit worthiness" in: Muir, Christopher B. 2006. "Industry Surveys Banking". Standard & Poor's Industry Surveys 55 Water Street, New York, NY 10041, November 30.

[41] Oja, Erik. 2009. "Industry Surveys Banking". Standard & Poor's Industry Surveys 55 Water Street, New York, NY 10041, December 24.

[42]Definitions quoted from: Oja, Erik. 2009. Op cit. The page number is indicated in parenthesis.

[43] Definitions quoted from: Oja, Erik. 2009. "Industry Surveys Banking". Standard & Poor's Industry Surveys 55 Water Street, New York, NY 10041, December 24, p. 26-27. The page number is indicated in parentheses.

[44] Funds provided by operations are calculated by adding non-cash transactions (for example amortization, changes in provisions, and gains or losses on sales of assets) to the net profit (loss).

[45] Since 1973, the FASB has been the designated organization in the private sector responsible for establishing standards of financial accounting that govern the preparation of financial statements. These standards are officially recognized as authoritative by the Securities and Exchange Commission (SEC). (Information taken from the website: http://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176154526495 – March 2010.)

[46] This information is found on pages 21-23 of the Statement of Financial Accounting Standards No. 95, FAS95, Statement of Cash Flows, November 1987, Financial Accounting Standards Board of the Financial Accounting Foundation, 401 MERRITT 7, P.O. BOX 5116, NORWALK, CONNECTICUT 06856-5116.

The following quotations in this section have been taken from this document. The page number is indicated in parentheses.

[47] This box was taken from standard 942-230-55- FASB - Financial Accounting Standards Board, 942 Financial Services—Depository and Lending - 230 Statement of Cash Flows - 55 Implementation General.

[48] Oja, Erik. 2009. "Industry Surveys Banking". Standard & Poor's Industry Surveys 55 Water Street, New York, NY 10041, December 24, p. 27. Quote taken from p. 27.

[49] Quoted from FASB - Financial Accounting Standards Board, 230 Statement of Cash Flows.

[50] We have adapted Altman's model to a financial institution by using EBT (earnings before taxes) rather than EBIT (earnings before interests and taxes).

[51] Net earnings were up by 23% between 2005 and 2006, while they rose by 4.6% between 2006 and 2007.

[52] Information found on the website: http://www.lehman.com/ - April 2010.

[53] The original quote reads as follows: "Lehman Brothers prêt à racheter un quart de son capital - Dividende. Lehman Brothers a fait savoir hier qu'il pourrait racheter jusqu'à 24 % de ses actions en circulation cette année et a augmenté son dividende annuel de 25 %, à 80 cents par titre. Ces annonces ont été bien accueillies à Wall Street, où la banque américaine gagnait plus de 1 % en cours de séance. Lehman a expliqué que son conseil d'administration avait autorisé le rachat d'environ 35 millions d'actions en 2005, pour compenser l'effet dilutif de l'attribution d'actions aux salariés."

[54] Les Echos N°19809 December 6, 2006 – Interview, p. 37.

The original quote reads as follows : " 'Je ne suis pas inquiet pour Wall Street, la concurrence entre places financières est saine', RICHARD S. FULD CHAIRMAN ET DIRECTEUR GÉNÉRAL DE LEHMAN BROTHERS".