NORGES HANDELSHØYSKOLE Bergen,
Fall 2012 Master Thesis within the main profile of International Business
Thesis Advisor: Professor Iris Stuart

Audit Failure or Lack of Accounting Candor?

THE CASE OF LEHMAN BROTHERS

By
Lilian Mwangi

.

Table of Contents

1. Executive Summary

The thriving of the global economy depends on the integrity of financial markets and the confidence of investors. External audits, as trusted monitoring mechanism, play a vital role in restoring the confidence of investors in financial information provided by public-trade entities. However, the recent financial institutions failures after issuance of unqualified audit opinions have cast doubt in the value of external audits. The aim of this paper is to evaluate the role of external audits in financial institutions and find the answer to the questions: ***to what extent are auditors responsible for failing to identify fraudulent financial statement and do financial standards contribute to audit failure?*** Lehman case analysis is used. The results indicate that Ernst and Young failure to discover potential fraudulent activity was partly contributed by the ambiguity in the accounting standards which may have in part biased the auditors' judgment and decision process.

2. Introduction

The thriving of the global economy depends on the integrity of financial markets and the confidence of investors. Transparency, accountability and fair business transactions serve as key elements in maintaining a healthy financial system hence a strong global economy. However, in a highly competitive business environment where management is expected to make decisions that create wealth for the shareholders, meet market expectations and is evaluated based on business performance may not necessary create a conductive environment that promote these key elements.

Given the significance of maintaining the integrity of financial markets and the confidence of investors, it is therefore vital for regulators (i.e. US Financial Accounting Standard Board (FASB), Security and Exchange Commission (SEC), Credit Rating Agencies (CRA) together with external auditors) to serve as trusted "gatekeepers" to ensure that investors are provided with financial information that is both reliable and relevant for investment decision making (Coffee 2006).

For instance, FASB is looked upon to choose and implement financial policies and standards used in evaluation of financial information. SEC is expected to provide effective monitoring and rules enforcement for public traded companies (Coffee 2006; Armour et al 2011). CRAs are required to give opinion about the credit worthiness of securities issuers and their financial responsibilities to mitigate risk and losses associated with defaults (SEC credit rating report 2003). And external auditors are obligated to evaluate business entities and provide a reasonable assurance that the financial statements are a true reflection of the entities' financial health and that the statements are compliant with the appropriate financial reporting framework i.e. US (GAAP)/IFRS (Stuart 2012).

Effectiveness of regulators, CRA and external auditors in their respective roles is therefore essential for creating and maintaining an environment that promotes transparency, accountability, and fair business transactions. This in turn enhances the confidence of investors and maintains the integrity of the financial market. However, the unexpected financial institutions failures after issuance of unqualified opinions during the financial crisis of 2007-2008 cast doubt on the ability and credibility of trusted gatekeepers. This paper focuses on the value of external audits, the challenges faced by audit professionals and factors that influence audit quality.

2.1 Literature review

Unexpected business corporation failures and discovery of fraudulent financial reporting after issuance of unqualified opinions have and continue to spark great interest among academic scholars and business researchers. Different research studies have been conducted in a quest to investigate and understand the reason behind audit failures. Results in some of these studies indicate that different factors influence the level of audit quality.

Audit quality can be defined as a function of i) the likelihood of an auditor discovering a financial misstatement and ii) the decision the auditor takes in connection with the discovery of the financial misstatement(DeAngelo 1981). The likelihood that an auditor will discover a financial misstatement and that he or she will take the appropriate action is closely linked with the auditor's competence and independence (DeAngelo 1981). An auditor's competence in this case means his or her knowledge, experience and effort exacted in any given audit engagement. The auditor independence is related to his or her relationship with a given client and how this affects his or her ability to conduct an audit engagement (DeAngelo 1981; Watts and Zimmerman 1981).

Previous research studies suggest that the audit risk model is flawed because of the business aspect of the accounting firms (Sikka et al. 2009). Auditors are usually hired by the firm they audit and therefore they may have financial incentives to remain in the client's favor (DeAngelo 1981; Magee and Tseng 1990; Sikka et al. 2009). Consistence with this argument, some experimental studies document that a high perception of client loss (Farmer et al 1987; Blay 2005), fee pressure i.e. audit firm in response to fees pressure are likely to reduce audit budgeted hours, emphasis on efficiency which may lead to auditor's reliance on internal controls in regardless of the client's risk profile (Houston 1999; Grambling 1999), and client retention (Chang and Hwang 2003) can impair auditors judgment hence the level of audit quality.

The presence of these incentives in addition to non-financial pressures are believed to unintentionally influence auditors to gather and evaluate evidence in align with their clients interest thus resulting to biased judgment and decisions (Moore et al. 2002; King 2001). However, King (2001) points out that auditors work within a team setting and are strongly affiliated with audit firms and professional organizations hence this affiliation mitigates the effects of selfinterest and unconscious biases. In addition, auditors because of their role as “repeated players” have a reputation to protect hence have strong incentives to provide high quality audits (DeAngelo 1981; Coffee 2006). However, this may vary as some researches document that auditors with higher perception of risks associated with potential litigation are likely to provide higher quality audits (Chang and Hwang 2003; Palmrose 1988; Johnstone et al. 2001) indicating that lower perception of risks associated with potential litigation may lead to low quality audits.

Kofman and Lawerree (1993) suggest that external and internal auditors play complementary roles. Internal auditors because of their position in the firm are able to gather information and provide other services at a low cost than the external auditors. However, because of the internal auditors close association with the firm in relation to employment; they are more likely to collude with management to misrepresent financial reports. External auditors on the other hand because of their independent position are less likely to collude with management hence more likely to provide high quality audits

Kofman and Lawerree (1993) further argue that if an accounting firm is hired by the management to do auditing and consulting services, the firm even though it may exist as a separate legal entity may be seen as internal auditor. This emphasizes the importance of independence and the influence that the lack of independence may have on auditor’s judgment (Jensen and Meckling 1976). Consistence with Kofman and Lawerree (1993), Carcello and Neal (2000) provide empirical evidence in supporting this view in relationship with a firm’s audit committee.

Carcello and Neal (2000) examined the relationship between the percentage of audit committee members who are affiliated to the firm and the likehood that the auditor will issue a going-concern-modified report to firms experiencing financial distress. Because such affiliated members have strong ties with the firm, their independence is likely to be impaired hence may ineffectively monitor the firm, giving rise to low quality audits. Measuring effectiveness by the likehood of the firm’s auditor issue a going concern report, Carcello and Neal (2000) find that for firms experiencing financial distress, the likehood of auditor issuing a going-on concern report is critical to the percentage of affiliated directors in the audit committee i.e. the high the percentage of these members the less likely the auditor issue the going-on concern report.

Research studies investigating the relation of consulting fees and auditor's independence have mixed results. For example, Defond, Raghunandan and Subramanyam (2002) find no evidence that non audit fees reduce auditor's independence when they measure independence with respect to auditor issuance of a going concern report, however, earlier studies by Parkash and Venable (1993) show that agency costs help explain the level of recurring nonaudit services purchased by firms from their external auditors. As management ownership decreases so does the incentive to make decisions that are aligned with the interest of the shareholders. This increases agency costs hence creates the need for high quality audits (Jensen and Meckling 1976). Accordingly, Parkash and Venable (1993) find that firms with low management ownership tend to purchase relatively less nonaudit services indicating such firms may want to retain the perception of auditor independence.

Research studies closely linked with auditor knowledge and expertise find domain-specific knowledge (i.e. task specific and industry-specific specialization) has positive impact on auditor judgment and decision process thus the level of audit quality(Knechel et al. 2012). Specifically, some experimental studies show that companies audited by auditors with industrial-specific knowledge are less likely to be involved with fraudulent financial reporting (Carcello and Nagy 2002) are associated with lower level of information asymmetry(Schauer 2002; Dunn and Mayhew 2004) and are less likely to restate their financial statements (Fleming et al. 2008). This suggests that auditors with industry-specific knowledge are likely to detect financial misstatements and management anticipating this is less likely to engage in fraudulent reporting.

2.2 Research Question and Methodology

Inspired by previous academic research, discussions held in class lectures and recent events and factors surrounding financial institutions failures both in Europe and USA has led to an increased desire to research further and gain a deeper understanding of the role and value of external audits, the challenges faced by audit professionals and factors that influence audit quality.

The aim of the Master thesis is to evaluate the role of the auditors in financial institutions. This is of significance because i) financial institutions play a vital role in the growth of economy in that they provide an avenue for businesses and investors to borrow and lend money in a safe environment, ii) the interconnectedness of financial institutions means that the failure of one financial institution may cause shocks that may have an adverse effect on financial markets and the economy as a whole and iii) their business operations in volatile environment and complexity of the financial products create a unique but challenging auditing environment that require auditors' expertise and sound judgment in order to provide high quality audits.

The problem statement of this paper is:

1) ***To what extent are auditors responsible for failing to identify fraudulent financial statements*?**
2) ***To what extent do financial standards contribute to audit failure?***

To answer the questions posed, the case analysis method is used. The case of Lehman Brothers is selected because it provides the analysis with all the important key elements in understanding the role and value of external audits, the challenges faced by audit professionals in a complex evolving business environment and factors that influence the audit quality.

The rest of the paper is structured as follows. The third section consists of a brief introduction of corporate governance. The fourth section gives a historical overview of Lehman Brothers Holding and the circumstances leading to its bankruptcy. The fifth section consists of the case analysis. Finally, the sixth section contains a summary and discussion of the limitation of the analysis.

3. Corporate Governance

Weak corporate governance has been linked to fraudulent financial reporting (Dechow et al. 1996; Beasley 1996) and failure of financial institutions leading to a negative impact on the local or even global economy. Given the significance of the relationship between reliability of financial reporting and the quality of corporate governance, it is therefore essential to establish strong corporate governance for the smooth running of financial institutions in an evolving and complex business world (Basel Committee on Banking Supervision Manual 2006).

Corporate governance can therefore be seen as a system that provides the structure through which corporate goals are set and methods of achieving these goals and monitoring performance are determined (Basel Committee on Banking Supervision Manual 2006). The manner in which management and board of directors govern business affairs should promote transparency and trust among its shareholders and other stakeholders. A strong transparent relationship creates a conductive environment for fostering strong effective corporate governance.

With strong effective corporate governance in place, financial institutions are able to minimizing chances of fraudulent financial reporting and maintain investors' confidence. This minimizes liquidity crisis, bank runs, lowers cost of capital and negative economic implications. It is therefore important for management and board of directors to choose and implement the right policies, appropriate internal controls and to monitor compliance which are key elements to ensure that the daily business operations and employee behavior are in line with applicable regulations and aligned with the shareholders expectations.

Maintaining strong effective corporate governance can therefore be viewed as a continuous effort from management and the board of directors who have the right incentives in place to act in the best interest of their shareholders and other stakeholders. This is easier done in principle than in practice, as research findings show, there exists a conflict of interest between management and shareholders. If management does not have the proper incentives in place, it may pursue objectives and goals that are not always aligned with the interest of the financial institutions and its shareholders (Jensen and Meckling 1976).

3.1 Conflict of interest

The relationship between corporate management and business owners can be described under the principle-agency theory framework. Jensen and Meckling (1976) define this relationship as a contractual agreement under which a manager (agent) is employed to carry out certain business transactions on behalf of the business owner (principle). This empowers the manager to initiate and implement important business decisions on behalf of his or her employer. However, since the manager is not a "residual claimer" he or she does not share the major effects on business profitability as a result of his or her actions (Fama and Jensen 1983).

The separation of business ownership from management increase conflicts of interest arising from the owner's desire to maximize profits and the manager's incentives to maximize his or her utility by engaging in activities which may not necessary be in the best interest of the business owner (Jensen and Meckling 1976; Fama and Jensen 1983). These incentives are known to increase as the gap between business ownership and management widens (Jensen and Meckling 1976; Fama and Jensen 1983; Shleifer and Vishny 1986).

With increased incentives to maximize utility by engaging in activities which may not be aligned with the interest of the business owner i.e. undertaking risky investments at the expense of the business owner and investors increases the temptation to cheat by issuance of fraudulent or misleading financial reports. This reduces transparency and increases agency costs. Potential investors and creditors anticipating the possibility of risks associated with agency costs and unable to correctly value the firm will demand low share prices and high cost of capital respectively (Akerlof 1970).

High cost of capital and low share prices decreases firm's value, consequently, increasing the risks associated with the loss of owners' wealth. This raises the need for placing monitoring mechanisms such as independent audits and bonding that mitigates these risks by enhancing transparency between management, owners and investors (Watts 1977).

3.2 Importance of Independent Audits

The significance of independent audits serving as effective monitoring devices to mitigated risks associated with conflict of interests (Jensen Meckling, 1976; Watts 1977; Watts and Zimmerman, 1986 and Powell 1999) can be traced back as early as the Medieval England period (Watts and Zimmerman 1983). The medieval merchants were in general businessmen who owned and operated small business firms with the aim of making profits. Their trade involved purchasing of goods from the producers and selling them in available markets. This meant that the merchants had to physically collect the goods from the producers and transport them to the available markets (Greif et al 1994; Kohl 2009).

Given the nature and size of their businesses, it was possible for the merchants to be able to operate their business without any problems. In order to maximize profits, merchants searched for good business deals which involved negotiating with producers to get the cheapest price available and sell the products at the highest price possible. In addition, the merchant tried to reduce direct costs i.e. transportation by collaborating with other merchants through merchants associations (Kohl 2009).

Merchants associations (i.e. merchant guilds) were volunteer groups that were formed to facilitate the smooth running of trade by ensuring that traders complied with trading rules and imposed fines or punishment to those who did not (Greif et al 1994). In addition, they searched and secured business opportunities and provided protection for their members. This helped the merchants to utilize their time and resources in securing goods and mitigated risks associated with loss of goods through robbery, piracy and sometimes through exaction of payments i.e. fines, taxes at different "check points" such as bridges and ports (Greif et al 1994; kohl 2009).

As trade evolved and new markets emerged, merchants found themselves with new opportunities to expand their businesses to different locations (distant markets). However, with new opportunities came new challenges (Kohl 2009). Given the nature of merchant's business, in order for the merchant to take advantage of the business opportunities at hand, he had to rely on others (i.e. hire agents who resided in distant markets, rely on family members or close friends). Entrusting others with his business left the merchant exposed to either misconduct (i.e. agents acting in their own best interest or incompetence of the people he relied on) since he was not always present to observe their actions (Watts and Zimmerman 1983; Kohl 2009).

To mitigate the risk associated with reliance or agency cost, the merchant associations played an important role as independent party in assisting the merchant to monitor the actions of the agents in distant markets. For example, in medieval England, an independent committee of about four members was selected to audit the merchant guilds accounts and verify if the agents complied with their contractual agreements (Watts and Zimmerman 1983). In addition, merchants received independent information from the merchant associations in regards to the agents' behavior and business opportunities presented to them. The merchants would then use this information to verify if the information they received from their agents was credible (Kohl 2009).

Fast forward, despite the fact that business structure has and continues to evolve through technology innovation, independent audits remain to be essential monitoring mechanisms. This is important in two ways. First, having corporate financial information audited by an independent auditor adds credibility to the information and assures users of the financial statements that the information is a fair presentation of the firm's financial health and can be trusted to make important investment decisions (Soltan 2007; Stuart 2011). Second, it enhances transparency between management, owners and stakeholders hence serves as a signal that the management incentives are aligned with the interest of the shareholders (Watts 1977).

Increased transparency and credibility of financial information has an economic effect since it reduces agency costs and potential risks associated with these costs hence improving firm's value. For example, given that financial information is reliable, investors and creditors can fairly value the firm. This reduces the "market of lemons" problem and as a result investors and creditors will be willing to pay the right amount for the company's shares and accept a lower cost of capital respectively (Akerlof 1970; Soltan 2007).

4. The Case of Lehman Brothers

4.1 Company Overview

The origins of Lehman Brothers Holdings can be traced back to 1844, when Henry the eldest son of Lehman at the age of 23 migrated to Montgomery, Alabama (Geisst 2006 Lehman Brothers Collection; Oliver and Goodwin, 2010; Obiri 2012; Knapp 2012). Henry established a small grocery shop selling dry goods and utensils to local cotton farmers (Lehman Brothers Collections, Baker). Six years later, Henry, together with his brothers, Emmanuel and Mayer, formed the Lehman Brothers. Their combined effort saw the business grow from a general merchandising to a commodities broker business that bought and sold cotton from the planters living in and around Montgomery (Geisst 2006, Lehman Brothers Collection; Oliver and Goodwin, 2010; Obiri 2012; Knapp 2012;).

After the death of their brother, Emmanuel and Mayer continued with the business and led the company for the next four decades (Lehman Brothers Collection, Bakery Library). During this period until 1920s, only family members had the right to become partners, with the exception of a brief partnership with cotton merchant (Lehman Brothers Collection, Baker Library). The partnership was formed to build a cotton warehouse to enabled Lehman to engage in larger sales and trades (Lehman Brothers Collection, Baker Library).

In 1958, Lehman opened an office in New York which gave the firm a stronger presence in the commodities trading business as well as a foothold in financial community (Geisst 2006, Lehman Brothers Collection, Baker Library; Obiri 2012; Knapp 2012). However, with much of its operations tied to the southern economy, Lehman’s business operations and financial position were adversely affected by hardship of the American Civil war and the company was practically bankrupt by the end of the war (Geisst 2006, Lehman Brothers Collection; Obiri 2012; Knapp 2012). The firm was then rebuilt after the war and continued with its operations concentrated in the New York office (Geisst 2006, Lehman Brothers Collection, Baker Library; Obiri 2012; Knapp 2012).

In 1870, Lehman assisted in the formation of the New York Cotton Exchange, as the first commodities future trading venture. Mayer Lehman was appointed to its first board of directors.

In later years the firm also helped establish the Coffee exchange as well as the Petroleum exchange (Geisst 2006, Lehman Brothers Collection, Baker Library; Obiri 2012; Knapp 2012).

4.2 Building a Financial Firm

The development of railroads after the Civil war helped usher America from farming to an industrial economy (Lehman Brothers Collections, Baker Library). With a flourishing railroad construction business, companies turned to financial markets to raise funds needed for expansions. This led to the introduction of the railroad bonds that were structured at affordable prices (Lehman Brothers Collections, Baker Library; Northrup 2003). The bonds were sold to individual investors, attracting new potential investors into the capital markets. Taking advantage of this opportunity, Lehman expanded its commodities business to include bond trading (Lehman Brothers Collection, Baker Library; Oliver and Goodwin, 2010).

In 1887 Lehman become a member of the New York Exchange as a merchant-banking firm (Lehman Brothers Collection, Baker). Over a period of 20 years, beginning in 1906, Lehman and Gold formed alliances to fund emerging retail industry. The two jointly underwrote securities issues for prominent retail industry names such as Sears, Roebuck & Co.; F.W. Woolworth Co.; May Department Stores; Gimbel Brothers, Inc (Geisst 2006, Lehman Brothers Collection, Lehman Brothers Collection, Baker Library; Oliver and Goodwin, 2010; Obiri 2012; Knapp 2012).

4.3 Emerging Markets

Lehman experienced significant growth under the leadership of Robert Lehman. He believed that consumption rather than production was the key to America's future prosperity hence he steered the firm to support and finance early-staged/developing industries toward mass consumption (Lehman Brothers Collection, Baker Library). His commitment in identifying growth companies in different industries exposed Lehman to numerous investment opportunities as business evolved and companies became more innovative (Lehman Brothers Collection, Baker).

Lehman's investment opportunities can be traced from the period of economic expansion in 1950, driven by arrival of electronic and computer technology to the period of great expansion of the oil industry. During the electronic age, the firm helped launch Litton industries and underwrote Digital Equipment Corporation first public offering. Lehman invested in future industry leaders, QUALCOMM and Loral Corporation as well as Murphy Oil, the development of Kerr-McGee's oil gas exploration and production business (Lehman Brothers Collection, Baker).The firm also advised on consolidation of the Keith-Albee and Orpheum theaters which resulted to the largest vaudeville circuit with more than 700 theaters. In addition, Lehman helped in funding Radio-Keith-Orpheum, Paramount Pictures and 20^{th} century Fox, airline companies and continued their involvement in supporting the retailing industry (Lehman Brothers Collections, Baker Library).

Lehman's other notable accomplishment was its involvement in raising funds for companies during the great depression. The firm helped devise a new financing method known as "private placement" which included strict lender protection measures to help mediate risk and encourage investment (Lehman Brothers Collections, Baker Library). As a result borrowers and lenders had the opportunity to raise needed capital and receive a good return with a tolerable level of risk respectively (Lehman Brothers Collections, Baker Library). In 1960s, Lehman expanded its capital markets trading capabilities in the area of commercial paper which led to its appointment as an official dealer for the U.S. Treasuries. In addition, Lehman increased its global presence by opening offices in Europe and Asia (Geisst 2006, Lehman Brothers Collection; Obiri 2012; Knapp 2012).

4.4 Power Struggle

In 1969, the death of Robert Lehman left a huge leadership void in the firm and combined with difficult economic environment led to poor financial performance. In 1973, Pete Peterson, the chairman and CEO of Bell and Howell was hired to rescue the firm. During his leadership, Peterson was able to steer Lehman Brothers from significant operational losses to five consecutive years of operational profits marked with a high return in equity in the investment banking industry (Aulette 1986; Eshanda 2010).

In 1975 Lehman Brothers acquired Abraham & Co and two years later merged with Kuhn, Loeb & Co to form the 4^{th} largest bank in the country (Aulette 1986; Eshanda 2010; Oliver & Goodwin 2010; Obiri, 2012). However, Lehman Brothers had a very competitive and dysfunctional internal environment that increased hostility and relationship alienation between investment bankers and traders (Aulette 1986; Oliver and Goodwin, 2010; Eshanda 2010). Most of this hostility was drive by how bonuses were allocated and distributed. The investor bankers seemed to receive a high bonus compared to the traders who contributed two thirds of Lehman Brothers revenues (Eshanda 2010; Aulette 1986).

To try and mitigate this hostility and promote teamwork, Peterson, in 1983, appointed Lew Gluckman to co-CEO with him in spite of the differences that existed between the two men (Eshanda 2010; Aulette 1986). Peterson had an investment banking background and strongly believed that the key to a successful business was centered around building relationship with clients, personal advice to corporation and underwriting (Aulette 1986; Eshanda 2010) while Gluckman believed that people’s taste had changed and that they were more interested in short-investments with quick returns rather than the traditional long-term investments (Aulette 1986, Eshanda 2010). To this extent he believed that success of the investment banking depended on its ability to design and created products that offered high returns and as a result entice clients to listen to their advice (Ho 2005).

The differences in opinion in regards to running the company, combined with changes that Gluckman introduce in effect did not mitigate but increased the tension in Lehman Brothers’ internal environment. This resulted to Peterson’s resignation leaving Gluckman as the sole CEO (Aulette 1986; Anderson 2007; Eshanda 2010). In addition, Lehman Brother lost some of its experienced investment bankers (Anderson 2007).

In 1984, after experiencing significant financial hardship, the firm was sold to Shearson/American Express for $360M to form Shearson Lehman/American Express (Cole 1984; Anderson 2007; Oliver and Goodwin, 2010).

4.5 A New Era

Ten years later, in 1994, Lehman Brothers was spun off from American Express and become an independent public company worth $75million in earnings and had 2.2% returns on equity (Oliver and Goodwin, 2010).

As the newly elected CEO, Dick Fuld, who had survived through the Lehman's internal warfare (Oliver and Goodwin, 2010) decided to steer the firm from a small bond trading firm known for its internal competitive but dysfunctional culture towards a new culture that embraced teamwork and ownership (Lehman Brothers annual report 2007). To this extent he made significant changes in employees' compensation packages and shares allocations (Oliver and Goodwin 2010).For example, in 1994 only 4% of shares were owned by employees but by 2006 employees owned 30% of the company shares (Oliver and Goodwin, 2010).

Under Fuld's leadership, Lehman experienced significant financial growth. For instance Lehman reported net positive earnings for a period of 13 years between 1994 till 2007. Lehman also experience an increase in market capitalization of USD 45billion in 2007 compared to USD 2 billion in 1994 (Oliver and Goodwin, 2010). Lehman stock's traded at $62.63 by November 2007 compared to $36.11 in November 2003. In addition, Lehman's financial services expanded to cover three main areas of business operations i.e. capital market, investment banking and investment management. The capital market segment contributed to 64% of total revenue while the investment banking and management segments contributed to 20% and 16% respectively (Lehman Brothers Annual Report 2007).

The capital market segment consisted of fixed income and equities and involved trading of financial instruments and research coverage. The capital market's major increase in percentage revenue was contribute by the growth of commercial and real estate mortgage business and equity offerings especially in non-US regions. However, the disruption of market condition as a result of mortgage crisis led to decline in revenue compared to other consecutive years (Lehman Brothers Annual Report).

The investment banking segment consisted of global finance and advisory services while investment management segment consisted of asset management and private investment management mainly for high net worth clients, mutual funds and institutional investors. Global finance and advisory services involved a range of activities which included and not limited to underwriting services, private placement, leverage finance, merger and acquisitions, restructuring and other corporate activities (Lehman Brothers Annual Report).

Towards the end of 1990, Lehman established a vertical integrated business model linking its origination capabilities and its capital expertise (Lehman Brothers annual report 2006). At the same time the U.S. subprime market traced back to the enactment of the Community Reinvestment Act (CRA) in 1977 was experiencing significant growth and proved to be a profitable business and investment opportunity for many banks (Markham 2010).

4.5.1 Subprime Markets

Subprime loans were loans issued to borrowers with poor or no credit history (Gramlich; Jansen el at 2008). The implication of these loans was an increase in risk associated with high probability of default and as a result subprime borrowers paid high interest rates and fees compared to their A-Credited counterparties (Gramlich 2007; Jansen el at 2008). This increase in high interest rates and fees made it impossible for majority of low income US citizens to own a home.

To promote home ownership for all citizens, the US government sought to change the subprime market which was primary dominated by non-conventional lenders by engaging the banks to make subprime loans available to the poor. To that effect the Home Mortgage Disclosure Act of 1975(HMDA) required banks in metropolitan areas to disclose their mortgage loans classification and geographic location to exposure and discourage the redlining practice in which banks concentrated their lending in wealthier neighborhoods(Fishbein & Essene 2010). Two years later, the banks were ranked by their Community ReinvesmentAct compliance and were pressured to offer subprime loans as a precondition for approval of their merger which was at that time the banking model for growth (Markham, 2010).

The issuance of subprime loans by banks did not make the loans less risky. However, securitization of these loans allowed the banks to diversify the risk by moving the loans off their balance sheets and lenders to transfer these risks to investors that had a greater risk tolerance (Brunnermeier 2009; Markham 2010). Lehman like other investment banks provided funds for financing the subprime loans. In addition, Lehman also repurchased and securitized these loans into structured financial products such as collateralized debt obligations (CDOs) and residential mortgage-backed securities (RMBS). These financial products were then grouped into different tranches[1] and received different credit ratings from renowned credit rating agencies (CRA). With good credit rating of triple and double As and a few triple Bs, the financial products seemed riskless (low default possibility) and become highly marketable both in the European and American capital markets (Markham 2010).

During this period mortgage business experienced significant growth and there was high liquidity in the market as result of an increase in demand for these high yield financial products. Lehman like other counterparties seized the opportunity and expanded its growth through acquisitions of subprime mortgage originators. For example between the period 2003 and 2004, Lehman acquisitions included BNC Mortgage and Aurora Loan Services, which specialized in Alt-A loans[2] (Snyder 2011). While investment in these acquisitions proved to be profitable during the mortgage market boom, this positioning, however, left Lehman vulnerable to risk of great losses in case of downturn in mortgage markets.

High liquidity in the market and coupled with a high demand for financial products also contributed to a lax of regulation. Mortgage lenders and brokers motivated by the incentive structures that were based on number loan closures, lowed their lending standards and began to tap to a new group of borrowers who had very low credit scores and/or no prove of source of income (Keys el at 2008). These borrowers were offered mortgage loans at adjusted interest rate which initially started with low “teaser” interest rates that were affordable and adjusted to higher interest rates in later stages essentially requiring the borrower to refinance the mortgage (Brunnermeier 2009). With rising home prices, the subprime borrowers were able to build equity in their homes hence able to refinance these loans (Gordon 2010).

4.5.2 Effects of Interest Rates on Subprime Mortgage Business

In the period between 2004 and 2006, the Federal Reserve with the aim to constrict inflationary pressure, slowly increased the interest rates resulting in contraction of the money supply (Besley and Brigham 2012, 2011; Bianco 2008). With a low money supply and higher

[1] A tranche defined is as“ a portion of several related securities that are offered at the same time but with different risks” or “ a group of securities that share the same characteristics and form a part of pool investment” (investopedia.com and dictionary.reference.com)

[2] Alt-A loans are mortgage related loans that fall between the subprime loans and the typical prime loans. The loans have a less degree of risk than subprime loans but still risky compared to the prime loans.

interest rates resulted to a slight decline in housing demand. At the same time the adjusted mortgage rates began to reset to their new higher interest rates. This created a new situation given the background of the subprime borrowers. With difficulty to meet their obligation to pay the high mortgage interest rates, their only option was to sell their homes. However, with no possibility to lower prices in the face of lower demand and coupled with no resources to pay realtor fees, it was impossible to sell their homes resulting to an increase in foreclosures and mortgage loans defaults (Brunnermeier 2009).

Increased foreclosures and defaults led to decline in housing values. This declined also began to have an indirect effect on securitized financial products (Bianco 2008; Brunnermeier 2009). The reason for this is because like other securities, mortgage-backed financial products usually received risk valuations using historical mortgage data. In addition, each mortgage-backed security had an underlying cashflow that was generated by interest payments of mortgage related loans. Since mortgage loans were usually bundled together and repackaged as riskless or high yield securities, it was therefore difficult for market participants to differentiate between the securities that were highly exposed to risk associated with default and foreclosures and those that were not. Hence inability to distinguish between these securities assets resulted to a panic in the financial markets and loss of investors' confidence in these products.

4.5.3 The Beginning of Lehman's Problems

Lehman major investments were tied to the mortgage business and about 64% of its revenue was generated through the fixed income and equities business operations. In addition, Lehman relied on the repo markets to finance its daily operations and consequently, used security inventory on its balance sheet as collateral (Lehman Brother Annual report 2007; Valukas 2010). Since these securities remained on Lehman's balance sheet for the repo transcation period, an increase in loss of investor's confidence in mortgage-backed assets would adversely affect Lehman's relationship with its counterparties and its ability to raise enough short term capital for its daily activities.

To see how this is possible, imagine an investor for some reason loses confidence in a particular financial security. This would increase the investor's incentive to find a ready market to sell the security. Now, assuming that this is a wide spread of loss of confidence in the same financial assets, more investors would want to trade their securities hence a high supply of these assets in the financial market. An increase in the assets would automatically suppress prices. Given the fact that a financial institution like Lehman may be holding the same kind of financial assets in its balance sheet, this would adversely affects its financial position as it recognizes losses as a result of decline in asset values. Counterparties perceiving these losses and fearing for more risk exposure because of uncertainty in the financial institution's creditworthiness will demand more collateral or decline business with the firm. This in turn will affect the firm's ability to raise short-term financing, negatively affecting its daily activities.

Because of Lehman high concentrated long-term investments in mortgage related assets (Valukas 2010), adverse changes in the mortgage market increased a lot of pressure in the firm. For one, Lehman needed to have the ability to repay its repo positions in order to maintain a positive relationship with counterparties, consequently securing continuous capital to support its daily business endeavors (Lehman Brothers Annual Report, 2007). Two, as a financial institution it was necessary for Lehman to have the ability to manage its balance sheet in response to fluctuations in anticipated risk and asset prices (Greenlaw et al 2008). In financial institutions unlike in other non-financial institutions the changes in leverage and changes in balance sheet size are positively related, thus the institutions adjust their balance sheets in such a way that leverage is high during the booms and low during busts periods (Greenlaw et al 2008).

For illustration purposes, assume that a financial institution has securities worth $100, debt worth $70 and equity worth $30. Suppose there is a decline in securities prices such that the value of the security holdings falls from $100 to $80. Since debt remains constant, equity will need to be adjusted in order to balance the left and the right side of the balance sheet. Thus the new changes are reflected in Exhibit 1.

Changes in Leverage ratios

Exhibit 1: Changes in leverage ratios

Before decline in securities prices				**After decline in securities prices**			
Assets		**Liabilities**		**Assets**		**Liabilities**	
Securities	$100	Equity	$30	Securities	$80	Equity	$10
		Debt	$70			Debt	$70
Leverage	**3,33**			**Leverage**	**8,00**		

- Leverage is calculated as securities divided by equity

If the financial firm's target is to maintain a leverage of 5 it would be necessary for the firm to sell securities worthy $30 and pay down debt worth $30. Managing the balance sheet is therefore essential in order to strengthen the balance sheet by reducing its size through sales of assets and payment of existing debt during the bust periods. This signals the firm's ability to meets its financial obligations. Inability to manage its balance sheet would have therefore resulted in Lehman maintaining a high leverage ratio which would have served as a negative signal to its creditors and investors as well as result in down grading their credit rating (Valukas 2010).

The credit rating was important to Lehman because low credit rating would adversely affect its liquidity and competitive position. Consequently, increasing the cost of borrowing and the likelihood of high exposure to risk associated with financial distress and bankruptcy (Lehman Brothers Annual Financial report 2007). As an financial institution dependent on repos for daily running of business operations as well as its interconnection with other financial institutions it was therefore necessary to ensure that its credit rating was unaffected (Lehman Brothers Annual Financial Report 2007). Faced with these two dilemmas, Lehman had incentives to find a solution that would both lower its leverage and provide the necessary finances to repay its repo loans. This would enable Lehman to maintain good relationship with its counterparties hence securing the source of funding for smooth running of the firm business operations.

4.5.4 The Lehman's Options and Dilemmas

In general, depending on its financial needs, a business corporation may opt to use internal generated finances to support its business operations or raise needed capital through issuance of debt or new equity offering (Myers and Majluf 1984). Lehman had only two of these options at its disposal to help manage its balance sheet hence lower its leverage ratio. However, generating internal finances or raising capital through issuance of new equity had negative impact on the overall value of the firm consequently lowering its stock prices.

For one, to generate internal finances, Lehman would have to sell some of its security inventories. Most of these securities were directly or indirectly linked to mortgage business. However, because of the increase in foreclosure and default, investors had lost confidence in these assets hence making it difficult to find a ready market to sell them (Brunnermeier 2009; Valukas 2010). In addition, more investors and financial institutions also had the incentives to sell off their mortgage related securities. An increase in supply and a decline in demand for these securities resulted to the financial markets flooded with devalued securities. Furthermore even if Lehman was successful in selling some of its security inventories, it would have to sell them at a discount which would have negative implications on the firm's overall performance (Valukas 2010).

Second, through issuance of new equity, Lehman had the opportunity to raise need capital to pay off some of its debts. This would enable Lehman to rebalance its balance sheet, hence lower its leverage ratio. However, issuance of new equity would not only lower stock prices (Myers and Majluf 1984, Jensen1986) but also be perceived as a sign of desperation(Brealey et al 2008) and therefore prevented Lehman to lower its leverage ratio by means of equity issues (Valukas 2010). To avoid the negative implications on stock prices as well as maintain its counterparties' confidence, Lehman opted to significantly reduce its leverage ratio by manipulating its accounts through repurchase agreements (Valukas 2010).

4.5.5 Sales and Repurchase Agreements

In practice, financial institutions use the repo markets to raise short-term capital through repurchase agreements to support their daily business operations (Valukas 2010). Sales and repurchase agreements can therefore be defined as transactions involving two parties, where one of the parties transfers a security to the other party as collateral in exchange of short-term capital (cash). The agreement is that the borrower will repay the cash plus interest and take back the security at the date of maturity (Madura 2010). Mostly, financial institutions treated the repo agreements as financing and therefore these securities used as collateral remained in the borrower's balance sheet. However, under certain conditions, it was possible for financial institutions to reclassify repurchase agreements as "sales" if the transactions met the sales requirement criteria provided under the provision of accounting for transfers and servicing of financial assets and extinguishment of liabilities, SFAS 140.

Lehman, like other financial institutions raised short term capital on a daily basis to finance their business operations (Valukas 2010) consequently, treating the transactions as financing (Lehman Brothers Annual Report 2007). However, Lehman also employed a different type of repo transactions known within the company as Repo 105. These transactions were similar to Lehman's normal financing repurchase agreements both in structure and magnitude. This means that the transactions were conducted using the same type of collateral, had similar counterparties and Lehman received coupon payments from the transferred securities (Valukas 2010). Given the similarity, Lehman executed the Repo 105 transactions in the same way as the normal financing repurchase transactions with the exception of the accounting treatment (i.e. the Repo 105 transactions were classified as sales).

Most of Lehman's repurchase transactions classified for as "sales" were true financing repurchase agreements and therefore the transferred securities should have remained on Lehman' balance sheet during the repo term (SFAS 140 Manual). The incoming borrowed cash would have increased its total assets and total liabilities simultaneously as Lehman would have recorded a corresponding liability representing its obligation to repay the borrowed cash. The leverage ratio and the balance sheet figures would have increased as well due to the changes recorded. Assuming that Lehman brothers would have used the borrowed cash to pay off some of its debt, there would have been no effect on its leverage ratios and the balance sheet figures would have remained the same since the borrowed cash would correspond to the debt paid.

In order to be able to document that the Repo 105 transactions were true "sales" and could be accounted for as sales under the provision of SFAS 140:9 & 98, i) Lehman had to ensure that neither the firm or its creditor had access to the transferred assets even in the event of a bankruptcy (SFAS 140 Manual, Paragraphs 27-28), ii) Lehman‘s counterparties (transferee) had the right and freedom to use the assets as they saw fit without any constrains (SFAS 140 Manual ,Paragraphs 29-34), and iii) Lehman had no direct or indirect control over the transferred assets through agreements that gave Lehman the right to repurchase the securities before their maturity or cause the buyer to retain the assets other than through a cleanup call (SFAS 140 Manual, Paragraphs 50-54).

To that extent, Lehman Brothers demonstrated that it isolated the transferred securities from itself and its creditors by obtaining a letter of "true" sale opinion (Valukas 2010; Lehman Brothers Accounting Manual). The proof of isolation of transferred securities under the SFAS 140 provision was considered only if "there was a true sale *at law"* and therefore by obtaining this letter, Lehman was able to meet this requirement (AU Section 336; 9336). Further, Lehman employed a high "haircut" to prove that it had "relinquished its control" over the transferred securities. Relinquishing control meant that Lehman had surrendered its "contractual rights and obligation to repurchase transferred or identical and /or substantially the same securities as those it had sold" (SFAS 140 Manual, paragraph 218)

Normally, the SFAS 140:29-34 guidelines for financing repurchase agreements, requires counterparties involved in these transactions to use highly liquid securities with 98% collateralization for repurchasing firms and 102% overcollateralization for security lenders. In addition, the transferred securities are to be valued at fair value, meaning that prices were adjusted according to market fluctuations. Since Lehman employed repurchase agreements with a fixed income security margined at 105% or equity security margined at 107% of the cash received, these repurchase agreements fell outside the SFAS 140:29-34 guidelines. This indicated that Lehman had relinquished control over its transferred securities (Lehman Brothers' Accounting Policy Manual).

In addition to acquiring a letter of true sale opinion and employing a high "haircut", Lehman set a firm wide limit on daily repo 105/108 transactions. These transactions comprised highly liquid securities (Valukas 2010; Lehman Brothers' Accounting Policy Manual). By meeting the SFAS 140 sales treatment requirement criteria, Lehman was legally able to remove the securities inventory from its balance sheet (Valukas 2010).

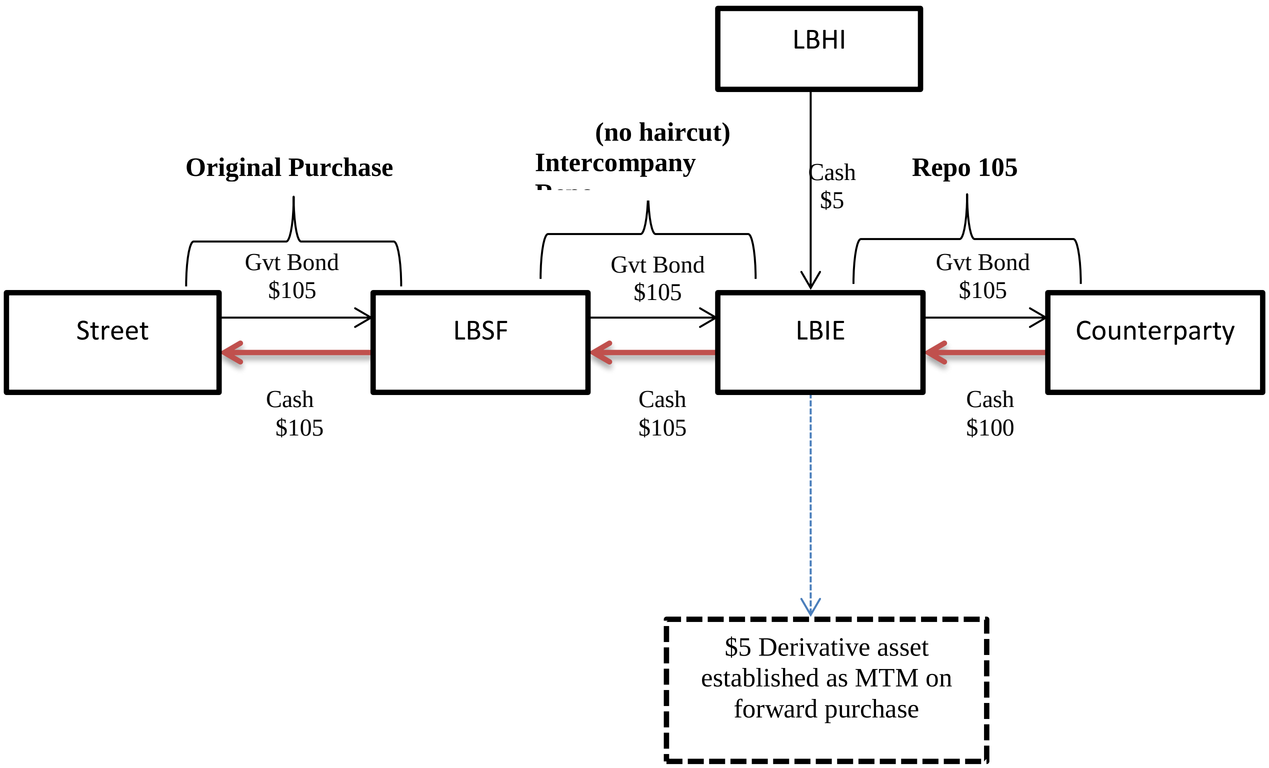
4.5.6 Origination of Repo 105 transactions

To appreciate the magnitude of the repo transactions, it is important to discuss the circumstances surrounding Lehman letter of “sales” true opinion. As mentioned earlier, for isolation to be considered under the FSAS 140 provision, there must be a true “sale” at law. Thus to demonstrate that a firm and its creditors have no access to transferred securities even in the event of bankruptcy, the firm had to seek a true sale opinion letter from a legal specialist. Lehman could not secure a true “sale” opinion letter from a US lawyer, since “repos could not be treated as sales in the US because the lawyers could not provide a true sale opinion under the US law” (Lehman Accounting Manual). However, Lehman was able to secure a true sale opinion letter from Linklaters, a law from based in the UK (Valukas 2010; Lehman Brothers Accounting Manual).

The letter was addressed to Lehman Brothers International (LBIE) based in London and was to be used for the entity’s business operations. If the letter was to be used for other purposes another than what it was intended for, consent from the law firm was required. However, Lehman was permitted to provide a copy of the letter to its auditors for the purpose of preparing financial statements (Valukas 2010). Since the “ true sales opinion was limited to the English law as applied to the English courts and was given on the basis that it would be governed by and construed in accordance with the English law”, Lehman carried out all its Repo transactions in UK (Valukas, 2010).

Although the letter was intended to be used in connection to LBIE business transactions, LBIE executed a significant volume of repurchase agreements on behalf of some of the US based Lehman entities (Valukas). For transactions originating from securities owned by US based entities, LBIE received securities worth $105 via intercompany repurchase transaction and $5 from Lehman Brothers Holding (LBHI) to be used for cash transfer. LBIE then would find a suitable European counterparty using these securities for an exchange of $100 cash. It would then transfer the $100 cash it received from the proceedings plus the $5 it had received from LBHI back to the US based Lehman entity. The US based Lehman entity would then use the money to repay its short-term debt. At maturity, LBIE would repurchase the securities from the European counterparty and the return the securities to the US based Lehman entity through the intercompany repurchase transaction. Exhibit 2 represents the Repo transaction process.

Exhibit 2: Lehman Brothers Repo 105 transaction process



Source: LBEX-WGM 748491

When LBIE undertook repurchase transactions originating from its own securities, it transferred securities worth 105$ or 108$ in exchange of 100$ cash which it used to repay its short term liabilities. At repo maturity, LBIE would then repay the borrow cash plus interest in exchange of the securities. LBIE financial results were consolidated to Lehman Brothers Holding financial statements hence affecting LBHI public reported balance sheet and leverage ratios (Valukas 2010).

4.5.7 Repo 105 transactions Balance Sheet Effect

The use of Repo 105 transactions had a significant impact on Lehman's ability to manage its balance sheet and leverage ratios. First, reclassifying and accounting for Repo transactions as "sale", Lehman, was able to temporary remove some of the security inventory from its balance sheet without having to record a liability indicating its obligation to repay the borrowed cash (SFAS 140: 9, 11a, and 98).

Second, using the cash received from Repo 105 transactions, Lehman was able to repay short term liabilities of the same amount. Temporary removal of security inventory from its balance sheet and repayment of short term liabilities worth of the same amount decreased both its total assets and liabilities. With declining changes in total assets and total liabilities, the gross and net leverage were also decreased (Valukas 2010). By effectively reducing its balance sheet size and leverage ratios Lehman demonstrated its ability to manage its balance sheet in response to fluctuations in anticipated risk and asset prices (Greenlaw et al 2008). Consequently, increasing investors' confidence and avoiding down grading of its credit rating.

Exhibits 3 to 5 in the appendix give numerical overviews of the repo 105 transactions effect on Lehman's balance sheet and leverage ratio.

4.6 The Fall of Lehman Brothers

The negative effect of an increase in delinquencies and foreclosures on the U.S. mortgage became evident in the beginning of 2007(Brunnermeier 2009). And by mid-2007, the subprime crisis had rapidly spread and its impact strongly felt in the financial markets. As assets prices became subject to market fluctuations it become even harder to value mortgage backed securities used as collateral in the repo markets (Hördahl and King 2008). Since these securities remained in the counterparties' balance sheet, it also created uncertainty in regards to the counterparties' ability to meet financial obligation without defaulting as a result of risk exposure associated with the securities.

Uncertainty in the repo markets and intensified financial turmoil created a high demand for riskless securities and increased cost of borrowing (i.e. market participants in the repo demanded more collateral) making market access more difficult for financial institutions to raise short-term financing to support their daily business operations (Hördahl and King 2008). At the same time, market participants and credit agencies began demanding investment banks to decrease their leverage or face down grading of their credit ratings (Valukas 2010).

The collapse of two Bears Steams' hedge funds highly exposed to the sub-prime markets, the High Grade structured Credit Strategies Enhanced Leverage Fund and High Grade Structured Credit Strategies Fund, in June, further erode investors' confidence in mortgage backed securities (Beams 2007;Reuters 2007). This loss of investors' confidence was reflected by the sharp decline of share prices for major investments banks including Lehman because of the kind of securities assets held in their balance sheet.

In response to the crisis and its impact, Lehman closed down some of its subprime units including BNC Mortgage (Onaran, 2007; Anderson and Baja, 2007). However, Lehman continued to invest in commercial and real estate mortgage markets in a belief that the sub-prime crisis was containable and had no major effects in these markets (Valukas 2010). For instance, late 2007, Lehman in partnership with Tishman Speyer participated in leverage buyout of Archstone-Smith, costing Lehman $22.2 billion (Johas and McSherry 2007; Brown 2012). In addition, during this period till mid-2008, Lehman top executives also focused on balance sheet management in order to lower Lehman leverage ratio and meet market's expectations.

The events of early till mid-2008, including the near collapse of Bear Stearns in mid-March and government announcement to take over Fannie Mae and Freddie Mac in September (Sorkin 2008; Berudette and Fitzgerald 2012) had further negative implications on Lehman's true financial position. Market speculation in connection to Lehman's survival was reflected on the steady decline of its stock prices (Einhorn 2008, Sorkin 2008; Berudette and Fitzgerald 2012). Surprisingly, in spite of the negative effects, Lehman still managed to report positive earnings for the first quarter and reduction of its balance sheet leverage ratios for the second quarter (Valukas 2010; Lehman Q10-quarter reports, 2008). A net loss of $2.8 billion in the second quarter was however, offset by Lehman's ability to raise $6 billion through equity offerings (Onaran and Harper2008) indicating some counterparties confidence in its ability to survive the crisis.

However, the continuance deterioration of mortgage market conditions made it difficult for Lehman to spring back to its normal financial position. In addition, because of loss of investors' confidence, liquidity in the market began to tighten as more and more investors and counterparties became risk averse. Analysts closely tracking investment banks financial performance including Lehman began questioning Lehman's valuation methods of certain mortgage assets and its ability to reduce its balance sheet leverage ratio (Einhorn 2008; Valukas 2010). Press conference calls revealed that Callan, Lehman chief financial officer and other senior management avoided direct comments on analysts' questions in regards to Lehman's valuation and disclosure practices (Einhorn 2008; Valukas 2010). Evidently, Lehman recognized less write downs compared to its competitors.

By mid-2008, Lehman had already begun talks with potential investors with an aim to raise new capital to offset the negative effects of the mortgage crisis, however, securing these deals proved difficult because of the kind of assets held in Lehman's balance sheet (Yeon-hee 2008; Yahow 2008). In addition, the announcement of Lehman's projected loss of $3.9 billion in the third quarter as a result of write downs and cancellation of a possible investment deal with the Korea Development Bank in early September (Yarow 2008) further plummeted Lehman's stock prices.

Between September 12 and 14, a series of emergency meetings with key CEOs on wall street, FED officials and Treasury Henry M. Paulson were held to discuss the fate of financial institutions and in particular Lehman. Treasury Paulson emphasized that there was no governmental intervention and therefore recommended finding other ways to raise capital and mitigate risks (Sorkin 2008). Without governmental assistance, it was optimal for Lehman to find a buyer and therefore Lehman began negotiation process with Barclays, a large U.K. commercial and investment bank. However, on September 14th, it was clear that the deal had fallen through after Barclays UK failed to obtain a regulatory approval from UK authorities as well as its management felt that sealing the deal was not in the shareholders' best interest (Mollenkamp, Serena, Craig and Lucchetti 2008).

In the morning of September 15 at approximately 1:45 am ET, Lehman Brothers Holdings filed for bankruptcy protection. The company had $ 639 billion in assets, $ 619 in debt and closed at a share price of $0.21. Lehman Brother became the largest bankruptcy filing in US history in comparison to Enron and WorldCom (Brickley 2008; Valukas 2010

4.6.1 Causes and Effects

The failure of Lehman Brothers was as a result of the following, one, the adoption of an aggressive growth business strategy which encouraged risk taking and high leverage exposed the firm to financial risk in case of market downturn(Valukas 2010). Second, management not adhering to the firms risk appetite limits led them to make large undiversified investments (i.e. acquisitions in commercial real estate and subprime markets) which adversely affected the firm's financial position when U.S. housing markets began to decline (Jonas and McSherry 2007;Brown , 2012).

Third, the management decision to ignore warning signs and continue to invest in the housing market in hope to "profit from counter-cyclical strategy" further exposed the firm to risk associated with these markets (Valukas 2010).The repercussion of these decisions was the loss of investors and counterparties confidence which was critical for Lehman Brothers to maintain. Inability to maintain confidence resulted to investors and counterparties pulling out of business deals with Lehman brothers and limited access to short term financial sources which affected its financial liquidity. Without liquidity the failure of Lehman Brothers was inventible (Sorkin 2008; Berudette and Fitzgerald 2012).

Being one of the largest investment banks with operations in the US and across the world, Lehman Brother's failure had negative impact on the global financial system. First, some financial institutions that were primarily involved with Lehman Brothers suffered huge losses. For instance the Reserve Primary Fund, a major player in the money market, invested millions of dollars in Lehman Bonds. On September 15th, the day Lehman Brothers filed for bankruptcy the $785million worth bonds become worthless. The losses that the fund incurred caused it to put a seven day freeze on investors redemptions as the net asset value of its shares fell below $ 1 (McCabe, 2010).

Second, the uncertainty in regards to the nature of Lehman Brothers transactions with banks and other institutional investors further eroded confidence in the financial markets. Participants in the repo and money markets began withholding their money or demanded for secure collateral. In addition banks also become unwilling to lend to each other as a result of fear of default. This contributed to the freezing of the credit markets resulting to government intervention to rescue the already fragile financial system.

Lastly, Lehman Brothers demise resulted to more than 75 separate bankruptcy proceedings and thousands of job losses (PricewaterCoopers 2009). As result thousands of people lost their source of income which meant that they were unable to meet their financial obligations such as mortgage payments, provision for the families and contribution to the society welfare in form of taxes among others. Inability to meet these financial obligations increased reliance on government assistance and unemployment benefits which in turn increased financial burden on the government. The overall effect was a decline in living standards and society welfare.

5. Analysis

The analysis below is aimed at finding the circumstances under which the auditor can be held responsible for failure to identify fraudulent financial statements and/or under which context financial standards can contribute to audit failure. First, SEC Act of 1934 and 1933 and Sarbanes-Oxley Act 2002 provisions are reviewed. Second, Lehman Brothers business environment management and financial performance is assessed. Third the role of external auditor is evaluated. Based on these findings the conclusions are made.

5.1 SEC Act of 1933/34 and Sarbanes-Oxley Act of 2002 Provisions Review

The establishment of the Security Exchange Act of 1933 and 1934 was to provide guidelines in regards to securities traded in primary and secondary markets. The SEC Act of 1933 requires firms to disclose financial information once in connection to a firm’s security offering and the SEC Act of 1934 requires public traded companies to periodically file financial reports with the Security Exchange Commission (SEC). However, the main objective is to ensure that investors have access to adequate financial information that can be used to make informed investment decisions (SEC Act 1933 and SEC Act 1934 Manual). In addition, SEC also requires public traded companies to comply with the Sarbanes-Oxley Act of 2002.

Lehman Brothers, as a public traded global investment bank, had the obligation to ensure that its financial reporting process complied with the SEC Act and the Sarbanes-Oxley Act 2002 requirements. Compliance with the requirements meant that Lehman Brothers financial information provided to market participants in connection to its security offering and trade was free from any “misrepresentations, deceit or fraud” and had the adequate disclosure (SEC Act 1933 and SEC Act 1934 Manual).

To ensure management compliance with the SEC Act requirements, the Sarbanes-Oxley Act 2002 mandated Lehman Brothers senior management involved with financial reporting process (i.e. CEO, CFO) to review and sign periodic financial reports filed with SEC. By signing these reports, the senior management acknowledged their responsibility in ensuring that the financial information provided was not misleading i.e. did not contain material misstatement and/or omit any information that could have a material impact on the firm’ future results and financial performance. Overall, the financial information provided reflected a true and fair presentation of the Lehman Brothers financial condition for the periods reported (Sarbanes-Oxley Act 2002, Section 302).

Sarbanes-Oxley Act of 2002 also mandated Lehman senior management to select, implement and maintain internal controls over financial reporting. In addition, the senior management were required to assess the effectiveness of these internal controls and report to Lehman external auditor and audit committee i) any weakness in the internal controls that may have a negative impact on the financial reporting process, ii) any significant changes that may have an impact on the internal controls and iii) any fraudulent activity regardless of its magnitude, that involved management or employees who had access to these internal controls (Sarbanes-Oxley Act 2002, Section 302 and 404(a)).

The senior management assertions and assessment of effectiveness of internal controls over financial reporting process were then required to be audited and attested by Lehman external auditor in accordance to the guidelines for attestation engagements provided by the Public Company Accounting Oversight Board (Sarbanes-Oxley Act 2002, Section 404(b)). Under the auditing standard provision (AS5)[3], Lehman external auditor was expected to i) exercise professional judgment in risk assessment and focus on areas that posed the highest risk, ii) scale the level of internal control testing to match the size and complexity of the company, iii) use risk-based approach to determine to what extent he/she may rely on the work of others (Auditing Standard Provision Manual, AS5).

As in the case of all public traded companies and especially at the height of the 2007-2008 financial crisis, Lehman compliance with the Sarbanes-Oxley Act 2002 and SEC Act requirements, acted as a reassurance to investors that the financial information provided was a fair presentation of the financial condition of Lehman Brothers and that this information was reliable to make informed investment decisions. In the light of the Sarbanes-Oxley Act 2002 and SEC Act requirements and the circumstances surrounding Lehman Brothers bankruptcy, the analysis of Lehman Brothers business environment, financial and management performance follows.

[3] The PCAOB' AS5 was approved by the SEC in 2007 and become effective on November 15th 2007 and afterwards.

5.2 Analysis of Business Environment

Lehman like its business counterparties operated and conducted its business in a volatile environment that subjected its business operation and financial performance to both favorable and adverse market fluctuations (Lehman Brothers Annual Accounting report 2007; Valukas 2010). To this extent Lehman management followed a low-risk brokerage business strategy that included acquiring assets for securitization[4] (Valukas 2010). This ideal strategy mitigated Lehman exposure to the subprime and commercial mortgage business should there be a downturn of markets. In addition, Lehman established appropriate risk management structure, internal controls and monitoring devices (Lehman Brothers Annual Accounting report 2007).

The risk management structure consisted of separation of duties between the risk management, revenue generation and management oversight of risk management function (Lehman Brothers Annual Accounting report 2007). Consistent with Valukas (2010) findings, Lehman risk management committee (i.e. selected senior management members, head of risk management and executive committee) had established risk management policies and risk limits to mitigate risk exposure associated with market, credit, liquidity and reputation risks. In addition, the risk management committee was responsible to allocate capital to each business units and establish trading and credit limits for counterparties in order to maintain diversified business operations (Lehman Brothers Annual Accounting report 2007).

The risk management committee met on weekly basis or as needed to discuss and assess Lehman risk exposure, position concentration and risk taking activities and to take the appropriate actions to mitigate these risks (Lehman Brothers Annual Accounting report 2007). However, in 2006, Lehman Brothers adopted an aggressive growth strategy that later become its seed of destruction. The strategy encouraged high leverage and rewarded risk taking behavior. In particular Lehman used its capital to acquire long-term investments (i.e. commercial real estate, leverage lending and private-equity), hence increasing its opportunities to earn significant returns from these investments.

[4] Securitization is the art of combining different financial instrument (i.e. mortgage-backed assets) into one large pool and then dividing the pool into small pieces also known as tranches. The small pieces/tranches are then repackaged according to the level of risk of default and sold to investors based on investor's risk appetite.

Lehman pursuit of growth opportunities was not a new phenomenon within the financial services industry. This can be explained by the fact that financial institutions unlike other business entities adjust their balance sheet according to market fluctuations (Greenlaw et al 2008; Adrian and Shin 2008). This means that as financial asset prices increases, a financial institution will increase its leverage (i.e. borrow funds and use the proceedings to invest in securities) such that it maintains a constant leverage ratio. Hence, Lehman short-term borrowing and long term investment can be seen as a way of adjusting balance sheet to reflect the market condition. However, investing in leverage lending, commercial real estate and private-equity exposed Lehman to greater business risk than its traditional business operations, because of the uncertainty in liquidity nature of these investments (Valukas 2010).

During the onset of the mortgage financial crises till July 2007, Lehman aggressively continued to invest in mortgage assets (Valukas 2010). This was contrary to the normal expectation of financial institutions' behavior because as financial assets prices declined, Lehman reaction should have been to sell some of its security inventory and pay off some of its short-term financial obligations in order adjust its balance sheet and maintain a constant leverage ratio (Greenlaw et al 2008).The miscalculated business judgment was as a result of management belief that i) the subprime crisis was containable and ii) Lehman Brothers had the opportunity to strengthen its competitive position and actually benefit from the subprime lending crisis as other financial institutions exited the market or reduced their risk exposure (Valukas 2010). This increased Lehman holdings in illiquid mortgage assets from $ 87 billion in 2006 to $175 billion at the end of the first quarter of 2008 as the market of these assets continued to deteriorate (Valukas 2010; Dutta et al 2012).

Increased holdings in illiquid mortgage assets coupled with credit agency and market participants' demand for investment banks to reduce their leverage ratios or face a credit down rating exerted pressure on Lehman management (Valukas 2010). This was because Lehman daily operations depended on the short-term funding raised in the repo markets. To raise enough short-term capital required Lehman to continuously maintain the confidence of its counterparties which exclusively depended on its credit rating (Lehman Brothers Annual Accounting report 2007; Valukas 2010). Lehman senior management had therefore every incentive to manage Lehman's balance sheet and avoid down grading of the firm's credit rating.

However, the senior management was unwilling to obtain needed funds through issue of new stock because an announcement of new equity issue is positively associated with dilution of existing stock prices (Myers and Majluf 1984; Jensen 1986; Valukas 2010). Low stock prices would decrease Lehman's market value hence affect the wealth of the existing shareholders (Myers and Majluf 1984; Jensen 1986). Second, the low demand for mortgage-backed financial products made it difficult for Lehman Brothers to find a ready market to sell these assets without incurring a loss. Selling at a loss (i.e. discounted prices) would result to a negative effect on the overall firm performance and increase loss of investors' confidence on Lehman's valuation remaining assets (Valukas 2010).

Because of these negative implications, Lehman, pressured to reduce leverage, increased its Repo 105 "sales" transactions normally near the end of each quarter. The objective of the transactions was to i) temporary remove security assets on Lehman's balance sheet, ii) borrow short-finances without recording a liability and iii) reduce leverage ratio on its balance sheet, hence lower its net leverage ratio and avoid down grading of its credit rating(Valukas 2010). However this raises some interesting questions i.e. one, why did Lehman increasingly rely on its Repo 105 "sales" transactions when it had a proven record of increasing profits each year over period of five consecutive years? And two, was Lehman's financial condition as healthy as its financial statements especially the balance sheet and income statement portrayed?

5.2.1 Financial Performance Analysis

In general financial information provided in financial statements of a business corporation ought to serve as a key indicator of financial performance of its business operations. Nevertheless, strong balance and income statements results may not necessary reveal an entity's liquidity or ability to meet its future financial obligation. Lehman, for a period of five consecutive years, 2003-2007, reported positive growth and an increase in net income in its financial statements (Lehman Brothers Annual Reports 2005; 2006; 2007).

However, Lehman's heavily reliance on Repo 105 "sales" transactions to reduce its net leverage ratio was a clear indication that the firm was experiencing difficulty in adjusting its balance sheet to reflect market conditions (Valukas 2010).This can be explained by the fact that Lehman adoption of its aggressive business model left it highly leveraged and therefore Lehman was extremely exposed to market risk given the large holdings in illiquid assets in its balance sheet. Research studies show that firms that are highly leveraged most of the time even though they may earn significant returns are likely to experience financial distress in the event of losses arising from market, credit or liquidity risks since the firms do not have enough capital to absorb these losses (Andrade and Kaplan 1997; Opler and Titman 1994).

In analyzing Lehman's financial performance, the statement of cash flow is used.

a) The Statement of Cash Flow Analysis

Although there has been a long standing debate in regards to the usefulness of the financial information in the statement of cashflow (Barton et al 2010; Kumar and 2008; Akbar et al 2011), market participants still continue to rely on this information to understand a business entity's cash inflow and outflow activities in order to assess its financial and liquidity position (FAS 95 Accounting Manual; Grier 2007; Maux and Morin, 2011).However, analyzing the statement of cash flow for financial institutions is usually limited because of off-balance sheet arrangements and differences in activities (i.e. financial institutions view cash as a "product" of its earning activities the same way as a traditional firm views its finished goods). This makes the statement of cash flow information to seem less informative and perhaps is often overlooked compared to that of manufacturing companies.

In spite of the differences in activities, financial institutions like the manufacturing companies need to generate net positive cashflow for their long-run survival (FAS 95 Accounting Manual). The statement of cashflow can therefore be seen as a valid financial document that contains informative information which combined with other information in relation to market condition and firm business prospects can be vital in assess financial institutions exposure to operational risks (Catanach 2000; FAS 95 Accounting Manual).

The analysis of Lehman's statement of cashflow is carried out over a period of five years to track down any significant changes in Lehman's operations, financing and investment activities. The aim of the analysis is to assess if the information provided in the statement of cash flow was informative enough to detect any warning signs in connection to Lehman's financial and liquidity condition prior to its bankruptcy. In addition, Lehman's free cash flow is computed using Lehman's annual financial statements filed with SEC.

Exhibit 5.2.1 summarizes financial data taken from net income, statement of cashflow and the free cash flow results.

Exhibit 5.2.1: Data from Lehman Financial Statements and Free Cash Flow

In Million (Net)	nov.03	nov.04	nov.05	nov.06	nov.07
Net Income	1,649	2,369	3,260	4,007	4,192
Cash Flow From Operations	1,896	-13,570	-12,205	-36,376	-45,998
Cash Flow From Investments	-1,108	-531	-447	-792	-1,698
Cash Flow From Financing	3,435	11,619	12,112	38,255	48,592
Free Cash Flow					
Operating cash flow		2,393	3,260	3,960	4,192
Change in NWC		13,436	13,489	34,976	51,572
Change in fixed assets at cost		608	325	898	1,169
Free Cash Flow (FCF)		-11,651	-10,554	-31,914	-48,549

Financial figures were obtain from Lehman's financial statements attached in the Appendix

***Operating cash flow was computed as a sum of net income and depreciation plus net change in interest income multiplied by 1 minus corporate tax rate.**

***Change in NWC is computed by subtracting difference in current year current liabilities and previous year current liabilities from the difference current year current assets – previous year current asset.**

***change in fixed assets at cost is computed by subtracting prior year net fixed assets from the sum of current year net fixed assets and depreciation.**

***FCF is computed by subtracting change in net working capital and change in fixed assets at cost from operating cashflows.**

Positive cash flow from operations is always a positive sign of financial condition of a firm than when it is negative (Grier, 2007). Lehman, over four consecutive years reported net cash deficit from its operations activities. This was not unusual since financial institutions from time to time have reported negative cashflow from their operations because of the differences in their daily activities. The greatest concern, however, was the rapid increase in cash deficit for the two years prior to its bankruptcy given the fact that Lehman had highly invested in assets whose market condition was deteriorating (Valukas 2010). In addition, the computation results of Lehman's free cash flow are negative over the four consecutive years and increase by an average of 127% for the two years prior to bankruptcy.

An increased in negative net cashflow from operation activities and lack of financial "slack" (i.e. free cashflow) meant that Lehman had to increase its reliance on short and long-term borrowings to offset the cash deficit and raise enough capital to sustain its operation activities (Myers and Majluf 1984). This explains the rapid increase in net cashflow from financing activities.

Raising capital through short or long-term debt was the norm for financial institutions and therefore was expected of Lehman. However, as discussed in this paper, financial institutions usually reduce their debt position during market downturn as a way to manage their balance sheet and hence reduce their exposure to losses due to decline in security assets (Greenlaw et al 2008). Lehman, however, seemed to increase its dependence on debt rather than reduce its exposure. Perhaps an indication of high likelihood of exposure to risks associated with financial distress (Andrade and Kaplan 1997; Opler and Titman 1994).

d) Financial Analysis Conclusion Remarks

Given the limitation of the statement of cash flow analysis because of the differences in financial institutions' business operation structures in comparison to traditional business firms, the results are inadequate in gauging Lehman's financial condition on a stand-alone basis. However, incorporating the results with other factors such as the level of leverage exhibited by Lehman, risks associated with high concentration in mortgage investments and the market condition for these investments, the results do indicate some significant warning signs in regards to Lehman's financial condition but perhaps not strong enough to raise concerns among markets participants because of the following reasons.

First, in comparing Lehman statement of cash flows with comparable financial institutions (i.e. Goldman Sachs & Morgan Stanley), the same trend is observed i.e. an increase in reported cash deficit from operations and increase in positive cash flow from financing for the years 2006 and 2007, two years prior to Lehman's bankruptcy. Second, financial analysts and market participants paid extreme attention to the balance sheet and income statement figures of financial institutions in connection to financial health assessment (Maux and Morin, 2011).In addition, looking at the information provided in Lehman's balance sheet and income statement, there was not enough disclosure for investors to "guess estimate" Lehman's losses in connection to mortgage business (Einhorn 2008; Valukas 2010).

Third, Lehman projected positive and increasing net income results, paid dividends and had the ability to meet its investments and financial obligations in a timely manner (Lehman Brothers Annual Report 2007). And finally, high leverage was the norm for financial institutions and the risks were not apparent because of high liquidity in the market. When returns are high, risks are perceived less costly than they actual are, and unfortunately, "as long as the music is playing in terms of liquidity", capital market participants tend to "get up and dance" (Chuck Price, Citibank CEO; Nakomato and Wignton 2007).

5.2.3 Analysis of Lehman Management Performance

The decision to adopt aggressive business model and to continue with risky investment in spite of market deterioration for these investments created conditions for Lehman management to:

a) Exceed the Firm Risk Appetite Limits

Initially, Lehman risk management committee had established various internal controls in connection with its investments concentration and use of "Repo 105" transactions (Valukas 2010). The internal controls included but were not limited to the firm risk appetite limits (Valukas 2010).However, in the period between 2006 and prior to its bankruptcy; Lehman management constantly exceeded these limits. For instance, an increase in commercial, real estate and leverage loans investments violated both the risk management policies and exceeded the firm's concentration limits (Valukas 2010). Evidence from emails collected and interviews conducted by the Bank examiner revealed that the senior management ignored the counsel of their own risk management personnel (Valukas 2010).

Key employees opposed to Lehman risk management practices and risky investment were often sidelined or replaced with willing employees. For example, in 2007, Lehman Chief Risk

Officer, Madelyne Antoncic[5]was replaced by Chris O'Meara (CFO) who had very little experience in risk management but was an experienced chief financial officer (Valukas 2010; Stanton 2012) and Michael Gelband, head of fixed Income Division, was replaced by London-based Roger Nagioff who later retired seven months before Lehman Bankruptcy (Maclean and Pettifor 2008; Mathiason et al 2009; Valukas 2010).

Replacement of experienced risk management personnel with less experienced ones serves as a signal of weakness in corporate governance and creates an opportunity to harbor fraudulent activities. As an investment bank operating in volatile business environment where securities prices are affected by daily market fluctuation, identifying, evaluating and managing risk exposures is of vital importance for the survival of the firm (Lehman Brothers Annual Report 2007; Stulz 2008; Valukas 2010). In addition, although the ultimate decision to undertake investments with known risks rests on the senior management, a firm needs experienced risk management personnel to be able to understand these risks and clearly communicate them to the senior management. This assists the senior management to make informed decisions to undertake investments that do not exceed the risk appetite limit set by the firm (Stulz 2008; Valukas 2010)

b) Rely on Repo "105" Transactions

Exceeding the firm risk appetite limits led Lehman management to undertake large investments whose liquidity was uncertain because of the changes in markets conditions for these investments (Valukas 2010). This had an effect in its profitability as the firm experienced declines in securitization business revenue (Valukas 2010). At the same time because of pressure to reduce its balance sheet holdings and leverage ratios Lehman significantly increased its Repo use especially in the period between 2007 and 2008.

In general, Lehman financial accounting systems were designed to treat all repo as financing transactions and therefore Repo 105 reclassified as "sales" were manually changed. This perhaps helped ensure that only financial securities that were marketable and qualified as investment grades (i.e. securities that were graded as A or triple A types) were used in the Repo

[5] Madelyne Antoncic is an experienced risk manager and currently works as the vice-president and treasurer in World Bank.

"sales" and that the firm wide use of "Repo 105" transactions did not exceed the internal firm limit(Valukas 2010).

However, evidence from documents and email correspondence indicated that management exceeded the internal imposed limits for the sole purpose of window dressing (Valukas 2010). For instance, in an email correspondence, Bart McDade then President and Chief Operating Officer when asked if he knew that the main purpose for Repo transactions was to reduce the net balance sheet. He replied, "I am very aware…it is another drug we r on" (Valukas 2010). Interestingly, further evidenced showed Repo 105 transactions significantly increased days before each quarter-end (Valukas 2010). For example, in August 2007, the Repo transactions amounted to $36.4 billion. In September and October the Repo amounts declined to $24.4 and $29.4 billion respectively. However, in November the amount increased again to $38.6 billion. This trend was observed in Lehman first and second quarter of 2008 and the Repo transactions at the end of the two quarters had significantly increased and amounted to $49.1 and $50.4 billion respectively (Valukas 2010).

The use of Repo "105" transactions would have been legitimate if the transactions were business motivated. However, restrictions on Repo "105" transactions use, plus the fact that the amount of transactions spiked towards the quarter ends proved that the transactions were only used to help Lehman obtained its leverage ratios through balance sheet management.

c) Use Questionable Risk Assessment Methods

Lehman risk assessment, monitoring and management were conducted using different risk measurements tools which included the VaR and stress tests (Lehman Annual Report 20017; Valukas 2010). In general, risk measurements tools depend on information gathered and therefore the results obtained can be biased as a result of mistakes in information gathering, excluding of known and unknown risks and other important market assumptions (Stulz 2008).

Obtaining biased results may lead a firm to undertake risks that exceed a firm risk appetite. This can results to large losses in adverse market conditions. For example, if a firm assesses risk using either stress or daily VaR, and finds that undertaking a certain investment may result to a 95% chance of gaining 12% in returns or 5% chance of a losing 2million, depending on the firm's ability to absorb losses, this may turn out to be a good investment. However, if the results are biased and the true estimates are 80% chance of gaining 15% in returns and 20% chance of losing 4 million, the firm, even though it has a chance of earning a higher return on the investments, is greatly exposed to risk associated with financial distress since it may not have the ability to absorb a loss of 4million.

Lehman risk assessment tests included only its trading positions (i.e. marketable securities, stocks), but not its real estate investments, private equity and leverage loans commitments because these assets were not freely traded (Valukas 2010). This meant that Lehman had no overview of the risk exposures associated with these investments. Without a proper overview of the risk exposures, it was difficult for the firm to adhere to its risk appetite limits and therefore continued to undertake investments that resulted to large losses at the peak of the financial crisis.

Interestingly, experimental stress tests conducted in 2008 that included the real estate investments, private equity and leverage loans commitments revealed that 79% of Lehman potential risk losses or about $7.4 billion lay with the excluded positions and only 21% or $2.0 billion was attributed to trading positions (Valukas 2010).

d) Inadequate Disclosed its Valuation Techniques

In the first quarter of 2007, Lehman adopted the SFAS 157 and valued its financial instruments and other inventory positions owned at fair value (Lehman Brothers Annual Report 2007). The SFAS 157 provision guidelines made it possible for financial institutions to categorize their financial instruments under three levels: i) Level I type of assets were mostly marketable securities (i.e. stocks traded in active markets, governmental and agency securities) and were valued at quoted prices available in financial markets (Lehman Annual Report 2007; Valukas 2010). ii) Level II type of assets were financial instruments and inventory positions (i.e. as non-govemental securities and certain mortgage asset backed securities) whose prices were not directly observable. However, these prices were easily estimated using available historical data and valuation models (Lehman Brothers Annual Report 2007). And finally, iii) Level type of assets consisted of financial instruments that were rarely traded hence prices were not easily obtained and therefore valuation of these assets depended on management best estimates based on its assumption of what market participants would use to price these assets (Lehman Annual Report 2007; Valukas 2010).

At the height of financial crisis and adverse market conditions most of the mortgage backed-assets had become illiquid and valuation of these assets depended on management judgment to determine the correct fair value (Valukas 2010). Lehman had in its possession a pool of large illiquid investments and accordingly reclassified most of these assets as level III (i.e. in mid-2007, about $11.4 billion of its mortgage and asset-backed securities in addition to $5.3 billion in US subprime residential mortgage assets were to move to Level III). And by the end of 2007 fiscal year, half of Lehman residential mortgage assets classified as level III were whole mortgage loans (Lehman Brothers Annual Report 2007).

However, in beginning of 2008, when information used to value some of these mortgage backed-assets become apparent and some of the financial institutions began to recognized losses, Lehman was slow in reclassify some its level III assets and did not recognize losses on a timely manner (Einhorn 2008). This resulted to market participants questioning Lehman valuation techniques. For example, David Einhorn, a hedge fund manager, sorted explanation of "Lehman justification of $200 million write downs on $6.5 billion pool of CDOs that included $1.6 billion of below investment grades pieces when market prices of comparable structured products had declined in value" (Einhorn 2008).

In addition, Lehman disclosures were sometime inadequate or misleading. For example, David Einhorn, skeptical of Lehman disclosure in connection to "large write up in level III corporate equities and Lehman ability to make a profit of $722million on 8.4 billion portfolios in a period when the S&P had declined by 10%" decided to countercheck the information with other sources. Surprisingly, the explanation offered by Lehman during the earnings conference did not match the information gathered by David Einhorn (Einhorn 2008).

Apparently, during the conference call, Callan, Lehman then CFO had indicated that in February, Lehman had completed a profitable pre-IPO round. However, David found out that in November 2005, Lehman Brothers had made initial investment of $112 million in KSK Electricity Financing. Later, in January 2008, KSK Electricity Financing completed its restructuring process and Lehman sold its investment for a gain of $65million. In addition, Lehman Brothers purchased KSK Energy Ventures shares for $86.5 million resulting to a third ownership of KSK Energy Ventures (Einhorn 2008).

Because of lack of transparency and inconsistences in Lehman disclosures, market participants increasingly lost confidence in Lehman reported assets values, resulting to constant decline in stock prices (Einhorn 2008; Valukas 2010).

5.3 Auditor Responsibility under the GAAS Guidelines

As Lehman external auditor, Ernst and Young‘s objective was to restore the confidence of market participants in the financial information provided by Lehman. To achieve this, Ernst and Young was expected to express an opinion over financial statements, that is to affirm if the information provided in Lehman financial statements presented a fair picture of the financial condition of the firm and if the statements were prepared in accordance to acceptable accounting framework i.e. US GAAP (Au Section 110, 02- Auditing Standard Provision Manual). In addition, Ernst and Young expected to assess and attest the effectiveness of Lehman internal controls over financial reporting process (Sarbanes-Oxley Act 2002, Section 404(b)).

To effectively conduct its audit engagements, Ernst and Young was expected to compile with the applicable audit guidelines set by the Public Company Accounting Oversight Board (PCAOB). This included but was not limited to:

a) Appointing Audit Engagement Team (AU 110, 10)

In selecting and assigning an audit engagement team Ernst and Young was expected to bear in mind the complexity of Lehman’s business operations and uncertainty of its business environment (Lehman Brothers Annual Report 2007). Given the fact that auditor knowledge and experience has a direct impact on the level of audit quality (Bonner 1990), it was extremely important for Ernst and Young to assign a competent team for all Lehman audit engagements (Au Section 110, 04- Auditing Standard Provision Manual).

b) Independence and Due Professional Care (AU 220-230)

The Auditing standard AU 220 requires that an auditor or audit team to be independent during all its audit engagements. This ensures that auditor judgment is not impaired and he or she is able to make impartial judgment and decisions. If the auditor is not independent or perceived not independent then the objective of external audits (i.e. to restore the confidence of market participants in the information provided in financial statements) is compromised.

As Lehman external auditor, Ernst and Young engagement team was required to ensure that it remained independent during all its audit engagements. In addition, the team had to plan and carry out its audit engagement with due professional care. This meant that the team had to exercise high levels of professional skepticism in all areas of the audit engagement (i.e. gathering and evaluating audit evidence) in order, for example, be able to detect financial misstatements if any (Bernardi 1994; Knechel et al. 2012) and perform additional procedures when deemed necessary(Shaub and Lawrence 1996).

c) Consideration of Fraud in Financial Statement Audit (AU 316)

One of the major concerns when it came to Lehman financial statements was the possibility that the information provide in its financial statement did not reflect the true picture of the financial health of the firm. As Lehman external auditor, Ernst and Young was expected to assess this information to ensure that it was presented in an accurate manner and prepared in accordance to the USGAAP accounting framework (Stuart 2010).

To effectively and efficiently achieve this objective, Ernst and Young needed to understand and evaluate Lehman business environment. This included but was not limited to understanding internal controls over financial reporting process to determine their effectiveness in preventing or detecting financial misstatements (Sarbanes-Oxley Act 2002, Section 404(b)). . Second, it was important for Ernst and Young to make note of any significant changes in economic or business trend. For example, the year 2007 marked the beginning of decline in the mortgage business operations and by mid-2007, it had already developed to a financial crisis (Hördahl and King 2008). This significant economic and business change had a huge impact on Lehman profitability, since 64% of its revenue was generated through the fixed income business segment (Lehman Brother Annual Report 2007; Valukas 2010).

Third, Ernst and Young needed to identify and focus on areas that posed the highest risk. In this case, Lehman's areas of highest risks given the market conditions were valuation of assets, recognition of losses in relation to mortgage crisis and Repo "105" transactions. The Repo "105" transactions posed significant risks since recognition of these transactions had direct impact on Lehman leverage ratio. In addition, Lehman was facing a lot of pressure from market participants and credit ratings to reduce leverage ratio or face down grading of its credit rating (Valukas

2010). Lehman there for had very strong incentives to ensure that it met the market participants and crediting rating expectations. Repo “105” transactions offered the best solution because it was technically a legitimate way of raising capital. However, it also provided potential means to conceal fraud.

Finally, based on Ernst and Young understanding and assessment of Lehman business operations and environment, the engagement team needed to gather “sufficient appropriate” evidence in order to provide a reasonable assurance of the Lehman financial condition i.e. by expressing an opinion over Lehman’s financial statements (AU Section, 01-02).

5.3.2 Overview of Ernst and Young Defense

Following Lehman bankruptcy, the United States Bankruptcy Court, New York appointed an Examiner to carry out an investigation in order to establish the causes that led to Lehman failure (Valukas 2010). During the investigation process, the Examiner became aware of Lehman’s Repo 105 transactions. Further investigation revealed that the purpose of Lehman repo “105” was not business motivated but a way for Lehman to manage its balance sheet. Evidence collected revealed that Repo 105 transactions increased in volumes during the period between 2006 and 2008 (Valukas 2010).

Based on further investigation in relation to Repo 105 transaction use, the Examiner concluded that there was “colorable claims that existed against Ernst and Young” for failure to i) adhere to auditing standards in the process of auditing and reviewing Lehman end reports and quarterly reports filed with the Security Exchange Council (SEC), and ii) investigate the whistleblower claim and communicate with Lehman’s Audit Committee (Valukas 2010).

As a result Ernst and Young faced litigation charges both in UK and in the US. In June 2012, following an 18-month investigations, Accounting and Actuarial Discipline Board, UK (AADB) dropped the charges against Ernst and Young and concluded “ there was no realistic prospect that a tribunal would make an adverse finding against Ernst and Young or any partners and staff’ (Irvine 2012; Shotter 2010). The decision was based on the fact that the Examiner report did not specify if the colorable claims applied to Ernst and Young in the US or in general (Treanor 2012). However, Ernst and Young, New York litigation case was moved from federal court to the New York State Court (Dye 2012; Shotter 2012). Early December 2012, Judge Oing ruled in favor of Ernst and Young. However, Ernst and Young still face possible lawsuit, should the New York attorney general choose to pursue investors' damages and restitutions against Ernst and Young (Freifeld 2012).

In view of the Examiner report and the outcome of Ernst and Young litigations, the analysis discussion follows and a conclusion is made.

5.3.3 Ernst and Young Performance Analysis

The discussion below is motivated by the problem statement posed in the beginning of this paper, that is to what extent i) ***are auditors responsible for failing to identify fraudulent financial statement and ii) do financial standards contribute to audit failure?*** To offer a concrete conclusion in regards to Ernst and Young auditing engagement, it is important to bear in mind some practical considerations.

First and foremost, Ernst and Young as an external auditor was required to provide a reasonable assurance that Lehman's financial presentations were not misstated. Provision of an assurance (i.e. auditor opinion) is normally based on some professional judgment (AU Section 230). However, professional judgment is also in part influenced by the level of auditor knowledge and expertise (Knechel et al. 2012) and therefore it is likely in some cases that mistakes (i.e. auditor fails to detect a misstatement) will occur. In this case, it is important to consider if the auditor in conducting the audit engagement adhered to the auditing guidelines provided by PCAOB. If the auditor conducted the engagement as required by the auditing standards then other factors should also be considered (i.e. unforeseeable future economic changes, fraud concealed by senior management, accounting standards ambiguity etc).

Second, when assessing the financial statements an auditor is required to check if the information is prepared in accordance to the applicable accounting guidelines. In this case Ernst was required to ensure that Lehman financial statements were prepared in accordance to the USGAAP. Unfortunately, not all accounting standards provide clear-cut guidelines. In such cases, the interpretation of the accounting standards will depend on management's judgment and sometimes the work of an expert. If such a situation arises, an auditor using his or her professional judgment can choose to rely on the work of an expert (AU Section 336). The most important is to ensure that the interpretation of such accounting standards still maintain the fairness and truthfulness of financial statements.

Finally, during an audit engagement and even after the audit engagement, an auditor may become aware of some information that could have an impact on his or her decision (i.e. a whistleblower letter, discovery of fraudulent activity etc). The auditor in this case is required to use some professional judgment when assessing the information at hand. If there is strong indication that the contents of the information are valid, then the auditor should deal with the issues raised.

For example, in May 2008, Ernst and Young received a copy of the whistleblower's letter. The letter was addressed to Lehman senior financial management and highlighted different accounting irregularities in connection to Lehman financial statements. These allegations were serious since they indicated that there was possibility of fraudulent activity. Accordingly, William Schlich and Hillary Hansen, Ernst and Young auditors interviewed Lee in connection to the letter. After gathering information, it was upon Ernst and Young auditors to use their professional judgment in deciding if the issues raised were supported by strong evidence to be dealt with and disclosed in the second quarter or not. In such cases, it may be difficult to prove that the auditor was negligent on a stand-alone basis. However, other factors can be considered to determine if the auditor was indeed negligent or lacked sufficient audit evidence to base his decision.

In analyzing Ernst and Young performance, first the allegations are assessed using the above criteria to make a conclusion *if Ernst and Young failed to identify fraudulent activity at Lehman and/or financial standards contribute to audit failure.*

a) Repo "105" transactions and Expert Letter issues

Ernst and Young was accused for not adhering to auditing standards in the process of auditing and reviewing Lehman end reports and quarterly reports filed with the Security Exchange Council (SEC). This allegation was connected with Ernst and Young allowing Lehman to use the Repo "105", thus Ernst and Young was seen as enabling Lehman to hind its true financial conditions from its investors (Valukas 2010).

The main objective of Ernst and Young as discussed above was to provide an opinion in regards to Lehman financial statements. This opinion is a reasonable and not an absolute assurance that Lehman financial statements were free from misstatement either arising from errors or fraud. Since this opinion is based on some professional judgment which in part is influenced by an auditor knowledge and expertise (Knechel et al. 2012) and partly by other factors, it is possible to argue that there was a fair chance that mistakes could occur. This is also applicable to when all the accounting standards are followed.

Other factors to be put into consideration in this case were economic factors that were affecting Lehman business operations as well as other financial and business corporations. These economic factors could in fact make audit quality seem poor since many financial institutions that received clean opinions did go bankrupt a few months after the issuance of clean audit opinions (Sikka et al. 2009). Second, because of interconnectedness of financial institutions it is possible that even health financial institutions would become insolvent as result of failure in one financial institution.

The second part of the objective was to ensure that Lehman financial statements were prepared in accordance to USGAAP. In this case, the question at hand is *if Ernst and Young by approving Lehman's use of the "Repo 105" transactions was in violation of the USGAAP.* Based on the evidence collected by the Examiner, the Repo "105" transactions were technically legitimate transactions and they complied with provision of the existing accounting standard (i.e. SFAS 140) at that time. The SFAS 140 in part provided Lehman senior management the opportunity to use professional judgment in deciding when Repo "105" transactions met the criteria to be reclassified as sales and not financing. In addition, as discussed in this paper, Lehman management ensured that the transactions met the necessary requirements under the SFAS 140 provision criteria (Valukas 2010). It is therefore fair to conclude that on a stand-alone basis, Ernst and Young by approving the "Repo 105" did follow the GAAS guideline.

The auditing standard AU 336 provides guidelines on when to rely on the work of an expert. In addition, the auditor is required to exercise professional skepticism and judgment when deciding to what extent he or she will rely on the work of an expert. In this case, Ernst and Young, New York needed to exercise professional skepticism when deciding to review the Linklaters letter of "true "sale opinion. However, the transactions were basically taking place in the UK and under the UK law, Lehman transactions were legitimate (Valukas 2010). We can therefore fairly conclude that Ernst and Young, London audited Lehman Brothers, London in accordance to the applicable auditing guidelines. Here we have to also remember that some rules that were applicable in UK may not have been applicable in the US and therefore this was a matter of auditor using his or her judgment based on the audit evidence at hand.

b) Some "Red Flags"

However, there were some "red flags" that raises questions in regards to Ernst and Young feasibility in dealing with the possibility of fraudulent activity at Lehman. First and foremost, Lehman began to use Repo "105" transactions as early as 2001 and increased the volume of the transactions in the beginning of 2006 through mid-2008. Evidently, these transactions did not have a legitimate business purpose but were used for balance sheet management (Valukas 2010).

Arguable, the balance sheet management or in this case window dressing has long been part of the financial industry and in most cases when window dressing, financial institutions are not in violation of applicable accounting framework. However, if window dressing in fact has a material effect on the firm financial health, it should be disclosed in the financial statements. Failure to disclose the effect of the window dressing is then a violation of the accounting framework.

From the perspective that Lehman used the Repo "105" as a balance sheet management tool, it was therefore important that Lehman disclosed its Repo "105" use because it had an impact on the leverage ratios (Valukas 2010) and therefore failure to disclose was in fact misleading the investors to believe that Lehman financial health was good when it was not. This meant that market participants based their investment decisions on misleading financial information (Valukas 2010).

Furthermore, in September 2006, Bharat Jain, Ernst and Young auditor, raised concerns in regards to Lehman use of Repo "105" transactions and potential reputation risks associated with these transactions (Lattman 2010). Later, between late 2007 and early 2008, Kelly Martin, Lehman Global Financial Controller from December 2007 to September 2008, became uncomfortable with the increase volume of Repo "105" transactions and raised his concerns with Callan, then the Lehman CFO as well as with William Schlich, Ernst and Young partner. His main concerns were the i) legitimate use of the Linklaters letter given fact that Lehman could not obtain a true sale opinion in the US, ii) potential reputation risks associated with the Repo “105” transactions, given the fact that none of Lehman competitors used the same accounting method (Valukas 2010). Lastly, the same concerns were raised by Lee, Lehman senior vice-president in finance division and whistleblower, during his interview with Ernst and Young.

In all the three occasions, there was no follow up and it seemed that Ernst and Young was comfortable with Lehman use of Repo “105” transactions. However, the fact that use of the Repo “105” transactions raised concerns in regards to Lehman “reputation risks” indicated that it was a potential risk factor especially in the height of the financial crisis and Ernst and Young should have further investigated to determine if Lehman excess use of Repo “105” transactions was in violation of the USGAAP.

c) Auditor’s Analysis Conclusion Remarks

When each allegation is taken as an isolated case, there is strong evidence that Ernst and Young did technically compile with the auditing guidelines. However, when the allegations are taken as a whole there is strong evidence to question Ernst and Young capability in dealing with possibility of fraudulent activity at Lehman.

I argued that Ernst and Young failure to discover potential fraudulent activity was partly contributed by the ambiguity in the accounting standards which may have in part biased the auditors’ judgment and decision process. In addition, given the fact that Ernst and Young approved Lehman accounting policy it perhaps made it challenging for Ernst and Young to confront Lehman management when the use of Repo “105” transactions escalated.

6. Summary

This paper was aimed at evaluating the role of external audits in financial institutions with the aim of finding the answer to the questions posed in the beginning of this paper i.e. to what extent ***are auditors responsible for failing to identify fraudulent financial statement and do financial standards contribute to audit failure?*** The case of Lehman brothers was used to evaluate Lehman’s external auditor Ernst and Young performance. The results indicate that Ernst and Young failure to discover potential fraudulent activity was partly contributed by the ambiguity in the accounting standards, perhaps, indicating a case of unconscious bias.

The analysis of Ernst and Young is based on the available information and data collected from the Examiner report, Lehman Financial statements and news articles from different business websites. The results are limited because of unavailable inputs from the auditor side (i.e. report from auditor’s working papers and other important information).

7. Reference

1. Akerlof, G.A., 1970. The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics,* Vol. 84, No. 3, (Aug)
2. Anderson, Jenny , 2007, The Survivor, The New York Times Available at: http://www.nytimes.com/2007/10/28/business/28fuld.html?_r=1&pagewanted=all [Accessed on the 12 April 2012]
3. Andrade, G., Kaplan, S. 1998: How Costly is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions that Became Distressed. In: The Journal of Finance, 53(5), 1443-1493.
4. Aulette K., 1986, Greed and Glory on Wall Street, *New York NY*: Random House, Inc.
5. AU section 336, Auditors Standards[online] Available at: http://pcaobus.org/Standards/Auditing/Pages/AU9336.aspx [Accessed on the 30th April 2012]
6. Beaudette, M. and Fitzgerald, P. (2012) Geithner: Lehman Wasn't Felled by J.P. Morgan, Collateral Calls, Wall Street Journal, Available at : http://online.wsj.com/article/SB10001424052702303360504577410353589465814.html [Accessed 10 June 2012]
7. Beasley, M. S., 1996. "An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud." *The Accounting Review* (October): 443-465.
8. Besley, Scott and Brigham, Eugene, 2012, 2009, Principle of Finance south-western , Cengage Learning , Mason, OH 45040, USA [Online] Available at: http://books.google.no/books?id=tKQoP5gk4SUC&pg=PA445&lpg=PA445&dq=The+Federal+Reserve+slowly+increased+the+interest+rates++Besley+and+Brigham+2008&source=bl&ots=lo1hTdler9&sig=PvR-x0nsyBCct5UWjm5dEMz0us&hl=no&sa=X&ei=QOuTT9LXGsbj4QT3rvDQDw&redir_esc=y#v=onepage&q&f=true [Accessed on the 16 April 2012]
9. Bianco, Katalina M., 2008, The Subprime Lending Crisis: *Causes and Effects of the Mortgage Meltdown,* CCH Mortgage Compliance Guide and Bank Digest [Online] Available at: http://business.cch.com/bankingfinance/focus/news/subprime_wp_rev.pdf [Accessed on the 12 April 2012]

10. Blay, A.D. 2005. Independence threats, litigation risk, and the auditor's decision process. *Contemporary Accounting Research*: 759-789.
11. Brickley, P (2008) Lehman makes it Official in Overnight Chapter 11 Filling, Wall Street journal. Available at : http://blogs.wsj.com/wallstreetcrisis/2008/09/15/lehman-makes-it-official/ [Accessed 10 June 2012]
12. Brown, E. (2012)What is next step for Archstone, http://blogs.wsj.com/developments/2012/05/25/whats-the-next-step-for-archstone/
13. Brunnermeier, Markus K, 2009, Deciphering the Liquidity and Credit Crunch 2007-2008, Journal of Economics Perspective, Vol 23, No 1, Pages 77–100 [Online] Available at: http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.23.1.77 [Accessed 20 April 2012]
14. Carcello, J.V., Stekely, W.B. and A.L. Nagy, 2002, Auditor industry specialization and Fraudulent financial reporting, Working paper.
15. Carcello, J.V., and Neal, T.L, Audit Committee Composition and Auditor Reporting, *The Accounting Review, 2000*
16. Chang C.J., and N.C. R. Hwang, 2003, The impact of retention incentives and client business risks on auditors' decisions involving aggressive reporting practices. Auditing: A Journal of Practice & Theory(September): 207-218
17. Coffee J.C. Jr., 2006, Gatekeepers: *The professions and Corporate Governance*, Oxford University Press, Oxford, UK.
18. Cohen, J.R. and Trompeter, G.M., 1998, An examination of Factors Affecting Audit Practice and Development, Contemporary Accounting Research Vol. 15, Issue 4, (April) 2010
19. Cole, Robert J , 1984, Shearson To Pay $360 Million to Acquire Lehman Brothers, Available at: http://www.nytimes.com/1984/04/11/business/shearson-to-pay-360-million-to-acquire-lehman-brothers.html [Accessed on the 12 April 2012
20. DeAngelo, L. E. (1981) Auditor Size and Audit Quality, Journal of Accounting and Economics 3(1981) 183-199. North- Holland Publishing Company
21. Dechow, P. M., R. G. Sloan, and Sweeney A. P., 1996. Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC. *Contemporary Accounting Research* 13(1): 1-36.

22. DeFond M.L., Raghunandan K., and Subramanyam K.R., 2002, Do Non-audit Service Fees Impair Auditor Independence? Evidence from On-Going-concern Audit Opinions
23. Dunn, K. and B. Mayhew. 2004. Audit Firm Industry Specialization and Disclosure Quality. Review of Accounting Studies 9, 1: 35-58.
24. Einhorn, D., 2008. Private Profits and Social Risk Available at : http://mrmortgage.typepad.com/blog/files/david_einhorn_private_profits_socialized_risk_40808.pdf [Accessed 10 December 2012]
25. Ellis, D (2008) Lehman suffers nearly $4 Billion loss. Available at :http://money.cnn.com/2008/09/10/news/companies/lehman/index.htm [Accessed 10 June 2012]
26. Eshanda, A James, 2010, Greed and Glory: The American Way!, *Journal of Alternative Perspective in the Social Sciences*, Vol 2, No 1, 415-429.
27. Fama, F.E. and Jensen, M.C., Separation of Ownership and Control, Journal of Law and Economics, Vol. XXVI, June 1983
28. Farmer, T. A., L. E. Rittenberg, and G.M. Trompeter. 1987. An investigation of the impact of economic and organizational factors on auditor independence. Auditing: *A Journal of Practice & Theory* 7: 1-14
29. Fishbein, A and Essene, R, 2010, The Home Mortgage Act at Thirty-Five: Past History Current Issues, *Joint Center for Housing Studies, Harvard University*, MF 10-7. [Online] Available at: http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/mf10-7.pdf [Accessed on the 12th April 2012]
30. Geisst, C. R., 2006. *Encyclopedia of American Business History*, New York, USA: Infobase Publishing
31. Gramling,A.A. 1999. External auditor's reliance on work performed by internal auditors: The influence of fee pressure on this reliance decision. *Auditing: A Journal of Practice & Theory* 18: 117-135.
32. Greif , A., Milgrom, P and Weingast B.R. , 1994, Coordination, Commitment and Enforcement: The case of the Merchant guild, *The Journal of Political Economy;*Aug 194; 102, 4; ABI/INFORM Global pg. 745. [Online] Available at: http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/proto/poldev/coorcomm.pdf [Accessed on the 9th Otcober 2012]

33. Greenlaw, D., D., Hatzius, J., Kashyap, A.K. and Shin H.S., 2008, Leveraged Losses: Lessons from the Mortage Market Meltdown, *Proceedings of the U.S. Monetary Policy Forum 2008*. Available at: http://research.chicagobooth.edu/igm/docs/USMPF_FINAL_Print.pdf [Accessed on the 29th April 2012]
34. Ho, K. (2005). Situating Global Capitalisms: A View from Wall Street Investment Banks. *Cultural Anthropology*, 20(1), 68-96.
35. Houston, R. W. 1999. The Effects of Fee Pressure and Client Risk on Audit seniors' time budget decisions. *Auditing: A journal of Practice & Theory 18: 70-86.*
36. Hördahl, P. and King M.R., 2008. Developments in Repo Markets during the Financial Turmoil, *Social Science Research Network*.
37. Jensen, M., 1986. Agency cost of free cash flow, corporate finance and takeovers. *American Economic Review Papers and Proceedings*, 76, pp. 323-329
38. Jensen, M.C., and Meckling, W.H., 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, Journal of Economics, October, 1976, V. 3, No 4, pp. 305-360
39. Johnstone, K. L and J. Bedard. 2001. Engagement planning, bid pricing, and client response to initial attest engagements. The Accounting Review 76 (2): 199-220
40. Jonas , I, and McSherry, M, (2007) Tishman and Lehman to buy Archstone-Smith http://www.reuters.com/article/2007/05/30/businesspro-archstonesmith-takeover-dc-idUSWNAS262120070530
41. Keys, Benjamin J., Tanmoy K. Mukherjee, Amit Seru, and Vikrant Vig. 2008. Did Securitization Lead to Lax Screening? *Evidence from Subprime Loans* [Online]Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1093137 [Accessed 20 April 2012]
42. King. R.R., An experimental investigation of self-serving biases in an auditing trust game: The effect of group affiliation.
43. Knapp, M. C. 2012. *Contemporary Auditing*. (9th Eds). Ohio, USA: Cengage Learning
44. Knechel, W.R, Krishnan, G.V., Pevzner, M., L Shefchik, L and Velury, U., 2012. Audit Quality Indicators: Insights from the Academic Literature
45. Kofman, F and Lawarree, 1993, Collusion in hierarchical agency, Econometrica 61, 629-659

46. Lehman Brothers Collection- *Contemporary Business, Baker Library*[Online] *Available at:* http://www.library.hbs.edu/hc/lehman/about.html [Accessed on the 28 March 2012]
47. Magee, R.P. and M-C. Tseng. "Audit Pricing and Independence." The accounting review 65 (1990): 315-36.
48. McCabe, E .P, (2010)The cross section of Money Market fund risks and Financial crises, Board of Governors of the Federal Reserve System, Available at: http://books.google.no/books?id=e4dd9oP5_rsC&pg=PA9&dq=primary+fund++and+lehman+brothers&hl=no&sa=X&ei=13LPT-6YF8vE4gTIiaX9Cw&redir_esc=y#v=onepage&q=primary%20fund%20%20and%20lehman%20brothers&f=false[Accessed on 4 April 2012]
49. Mills, Joshua, 1994, Company Reports; Parent sets a Spinoff Lehman , The New York Times[Online] Available at: http://www.nytimes.com/1994/01/25/business/company-reports-parent-sets-a-spinoff-of-lehman.html [Accessed on 20 April 2012]
50. Mollenkamp, C, Craig, S, Serena, N.G and Lucchetti, A, Lehman Files Bankruptcy; Merrill Sold, AIG seeks cash Available at: http://online.wsj.com/article/SB122145492097035549.html[Accessed 10 June 2012]
51. Moore, D.A, Loewenstein, G., Tanlu.L, and Bazerman,M.H, Auditor Independence, Conflict of Interest, and the Unconscious Intrusion of Bias
52. Myers, S.C. , and Majluf N.S., 1994, Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have, *Journal of Financial Economics* 13:187- 221
53. Obiri, C., 2012. Could the failure of Lehman Brothers have been Prevented.
54. Oliver, J and Goodwin, T, 2010, How They Blew it: The CEOs and Entrepreneurs Behind Some of the World's Most Catastrophic Business Failures Available at :http://books.google.no/books?id=dE3BgnsaOrQC&printsec=frontcover&hl=no&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false, [Accessed on the 4 May 2012]
55. Onaran,Y and Harper, Christine (2008) Lehman Raises $6 Billions after $2.8 Billion Loss available at http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a3q.Yluhc0MY [accessed 9 June 2012]

56. Opler, T.C and Titman, S.1994, Financial Distress and Corporate Performance, *The Journal of Finance.* Vol. XLIX, NO 3. (July)
57. Palmrose 1988. Audit litigation research: Do the merits matter? An assessment and directions for future research. Journal of Accounting and Public Policy 16 (4) 355-378.
58. Parkash, M, and Venable, C., 1993. Auditee incentives for auditor independence: the case of nonaudit services. The Accounting Review, Vol. 68, January, pp. 113-133.
59. Power, M, 1999, The Audit Society: *Rituals of Verification*, Oxford University Press Inc., New York.
60. Reuters News, (2007) 2 Bears Stearns Funds are Almost Worthless. Available online at: http://www.nytimes.com/2007/07/17/business/17cnd-bond.html [accessed 9 June 2012]
61. Shleifer, A., and R. Vishny, 1986. Large Shareholders and Corporate Control, Journal of political Economics, 94 (June), 461-488.
62. Sikka, P., Filling, S. and Liew, P. 2009, The Audit Crunch: Reforming Auditing, Managerial Auditing Journal, Vol. 24, no.2, pp.135-155.
63. Sorkin, A.R (2008) Lehman Files for Bankruptcy; Merrill Is Sold http://www.nytimes.com/2008/09/15/business/15lehman.html?pagewanted=all
64. Stuart, I.C. , 2012,Auditing and Assurance Services: An applied Approach, McGraw-Hill, Inc., New York, NY 10020
65. Stulz, R.M. 2008 , Risk Management Failures: What are They and when do They Happen, *Social Science Research Network*
66. Quint, Michael, 1993, Primerica Will Buys Shearson for $ 1 Billion, The New York Times Available at: http://www.nytimes.com/1993/03/13/business/primerica-will-buy-shearson-for-1-billion.html [Accessed on the 12 April 2012]
67. Valukas, A.R. Report of the Examiner: Available at : http://jenner.com/lehman [Accessed 10 May 2012]
68. Watts, R. and Zimmerman, 1981, The demand for and supply of accounting theories: The market of excuses, Accounting Review, 273-305.
69. Watts, R. and Zimmerman, 1983, Agency problems, auditing and theory of the firm: some evidence. Journal of Law and Economics 26(3), 613-633.
70. Watts, R.L. 1974. Accounting objectives.

71. Yarow, J. Woe is Lehman: Korea Talks ends, stock Tank. Available at http://articles.businessinsider.com/2008-09-09/news/30049555_1_korea-talks-end-neuberger-lehman-brothers-holdings [Accessed 10 June 2012]
72. http://www.sec.gov/news/studies/2009/sox-404_study.pdf
73. http://www.guardian.co.uk/business/2009/feb/15/banking-recession
74. http://www.mirror.co.uk/news/uk-news/failed-lehman-brothers-bank-boss-354773
75. http://www.cornerstone.com/files/Publication/cec93271-eee6-4f9a-84cf-631145af6554/Presentation/PublicationAttachment/eddf6dfb-ac2d-464f-b8f5-666faf1b749b/Cornerstone_Research_Risk_Management_Failures.pdf
76. http://wlkc.gdqy.edu.cn/res/skillsres/resources/2012/04/05/18/E6EA4279-0981-4273-8EE4-6A7311D65500.pdf
77. http://newsandinsight.thomsonreuters.com/Securities/News/2012/12_-_December/NY_cannot_seek_fees_paid_to_Ernst___Young_by_Lehman/
78. http://www.forbes.com/sites/francinemckenna/2012/12/13/lehman-troubles-not-over-for-ernst-young/
79. http://dealbook.nytimes.com/2010/12/21/cuomo-sues-ernst-young-over-lehman/
80. http://www.forbes.com/sites/francinemckenna/2012/12/13/lehman-troubles-not-over-for-ernst-young/
81. http://www.reuters.com/article/2010/03/22/lehman-ernstyoung-idUSN2221089720100322
82. http://www.reuters.com/article/2010/03/22/lehman-ernstyoung-idUSN2220532520100322
83. http://apps.business.ualberta.ca/mlounsbury/markets%20on%20trial%20abstracts/swedberg%20paper.pdf
84. http://www.stanfordlawreview.org/online/misconceptions-about-lehman-brothers-bankruptcy
85. http://www.writeacademic.com/the-role-of-auditors-during-the-recent-financial-crisis-and-the-future-of-audit/
86. http://www.directorship.com/anton-r-valukas-on-the-audit-role-in-preventing-financial-crises/2/
87. http://www.ft.com/intl/cms/s/0/2452d926-bc85-11e1-a111-00144feabdc0.html#axzz2FP4mTxRD

8. Appendix

To demonstrate the Examiner's simplified balance sheet is used with an assumption that Lehman Brothers receives $100 million cash from its repo transactions. Gross and net leverage are computed as total assets divided by stockholders' equity and total assets minus collateralized agreements divided by stockholders' equity respectively (Valukas 2010).

Exhibit 3 shows the calculation of the gross and net leverage ratios before undertaking Repo transactions.

Exhibit 3 : Leverage Ratios Before Undertaking Repo Transactions

Assets		**Liabilities**	
Cash	7,500	Short Term financing	200,000
Financial Instruments	300,000	Collateralized Financings	275,000
Collateralized Agreements	350,000	Long term Debt	150,000
Account Receivables	20,000	Account Payable	98,000
Other Current liabilities	72,500	Stockholders' equity	27,000
Total	**750,000**		**750,000**
Gross Leverage	**28**		
Net Leverage	**15**		

Exhibit 4 shows the calculation of the gross and net leverage ratios and changes in cash and security inventory balances after undertaking Repo transactions. There is no impact on the total assets or total liabilities thus the gross and net leverage ratios remain the same.

Exhibit 4 : Leverage Ratios After Undertaking Repo Transactions but Before Payment

Assets		**Liabilities**	
Cash	107,500	Short Term financing	200,000
Financial Instruments	200,000	Collateralized Financings	275,000
Collateralized Agreements	350,000	Long term Debt	150,000
Account Receivables	20,000	Account Payable	98,000
Other Current liabilities	72,500	Stockholders' equity	27,000
Total	**750,000**		**750,000**
Gross Leverage	**28**		
Net Leverage	**15**		

Exhibit 5 shows calculations of gross and net leverage ratios after repayments of collateralized financing worth $100 using cash received from repo 105 transactions. This reduces security inventory and collateralized financing balances hence enabling Lehman Brothers to reduce its balance sheet size and report lower leverage ratios.

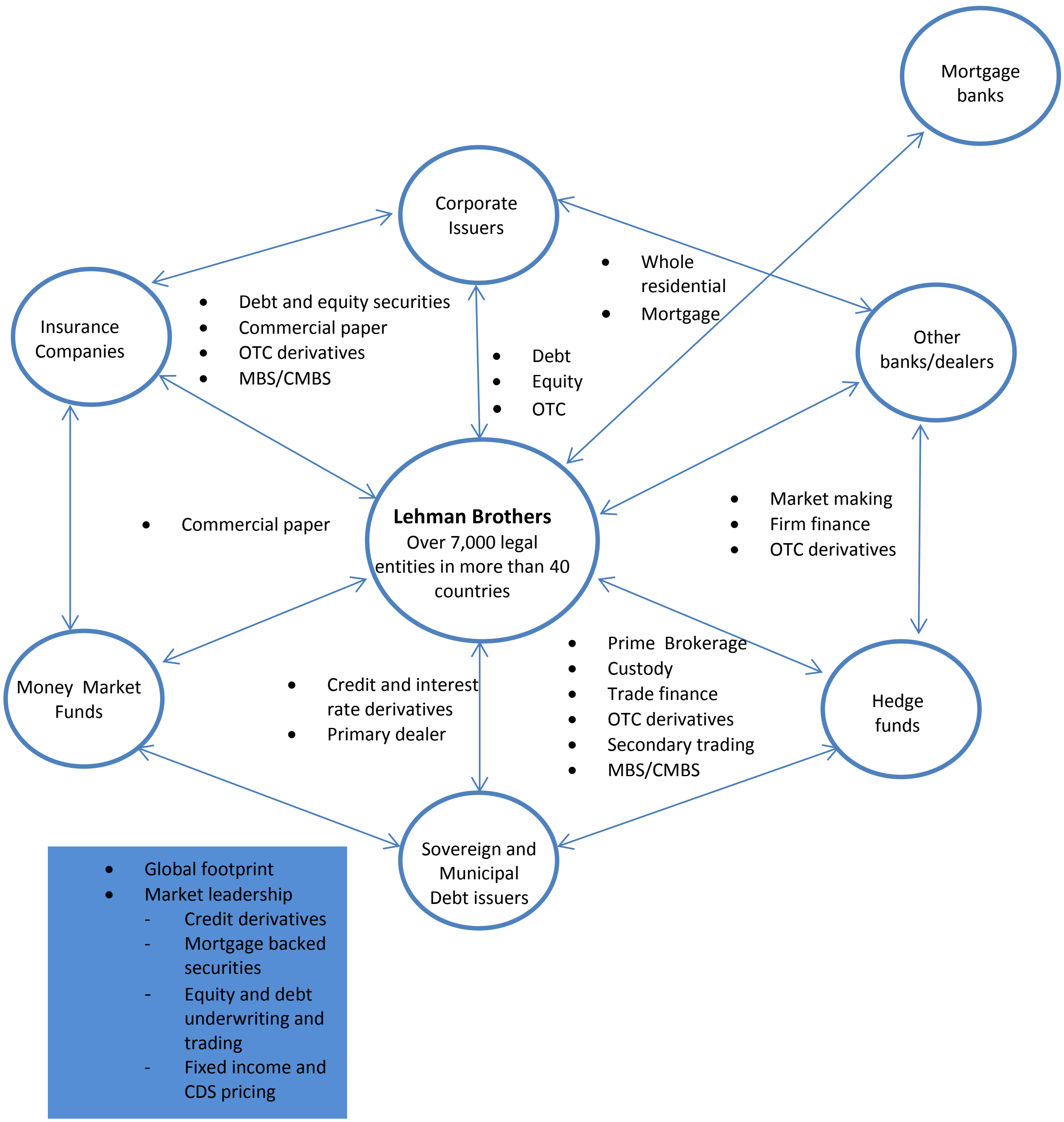
Exhibit 5 : Leverage Ratios after Short –Term Liabilities Payments

Assets		**Liabilities**	
Cash	7,500	Short Term financing	200,000
Financial Instruments	200, 000	Collateralized Financings	175,000
Collateralized Agreements	350,000	Long term Debt	150,000
Account Receivables	20,000	Account Payable	98,000
Other Current liabilities	72,500	Stockholders' equity	27,000
Total	**650,000**		**650,000**
Gross Leverage	**24**		
Net Leverage	**11**		

Exhibit 6: Lehman Brothers stock performance, 1st November 2007- 15th September 2008

Source: finance.yahoo.com

Exhibit 7 represent Lehman Brother's Business Connections



Source: PricewaterCoopers

Exhibit 8 Computation of Free cashflow and Change in Working Capital

Tax Interest Rate	34,44%	36,38%	35,65%	36,08%	33,50%
					35,21%
INCOME STATEMENT	**2003**	**2004**	**2005**	**2006**	**2007**
Revenues	17,287	21,250	32,420	46,709	59,003
Operating Expenses	8,640	9,674	17,790	29,126	39,746
Gross profit	8,647	11,576	14,630	17,583	19,257
Other operating expenses	6,111	8,058	9,801	11,678	13,244
Depreciation	0,315	0,426	0,428	0,514	0,577
Operating income	2,221	3,092	4,401	5,391	5,436
Interest paid	0	0	0	0	0
Interest received	0	0	0	0	0
Other non-operating income	0	0	0	0	0
Pretax income	2,221	3,092	4,401	5,391	5,436
Tax	0,765	1,125	1,569	1,945	1,821
Net income	1,456	1,967	2,832	3,446	3,615
Extraordinay items	0				0
Net income after extra items	1,456	1,967	2,832	3,446	3,615
Dividends	0,178	0,258	0,302	0,342	0,418
Retained earnings	1,278	1,709	2,530	3,104	3,197

BALANCE SHEET					
Cash and equivalents (policy)	0	0	0	0	0
Cash and equivalents (NWC)	7,922	5,440	4,900	5,987	7,286
Short term investments	292,636	339,772	393,162	483,762	667,733
Other current assets	1,626	2,122	1,302	2,052	2,650
Net fixed assets	2,806	2,988	2,885	3,269	3,861
Long term investments	3,510	3,562	4,558	3,362	4,127
Other long term assets	3,561	3,284	3,256	5,113	5,406
Total assets	312,061	357,168	410,063	503,545	691,063
Short term liabilities	211,718	232,765	267,977	58,609	53,307
Current portion of LTD & Short-Debt	2,331	2,857	11,351	20,638	28,066
Other current liabilities	39,999	50,140	44,975	302,517	434,687
Long term debt	41,303	53,561	53,899	81,178	123,150
Other long term liabilities	2,226	2,925	15,067	21,412	29,363
Total Liabilities	297,577	342,248	393,269	484,354	668,573
Preferred stock	1,045	1,345	1,095	1,095	1,095
Common stock	5,000	4,335	3,501	2,239	1,697
Retained earnings	7,129	9,240	12,198	15,857	19,698
Total liabilities and equity	310,751	357,168	410,063	503,545	691,063
Operating cash flow		2,393	3,260	3,960	4,192
Change in NWC		13,436	13,489	34,976	51,572
Change in fixed assets at cost		0,608	0,325	0,898	1,169
Free Cash Flow		**-11,651**	**-10,554**	**-31,914**	**-48,549**