

An examination of accounting for repurchase agreements

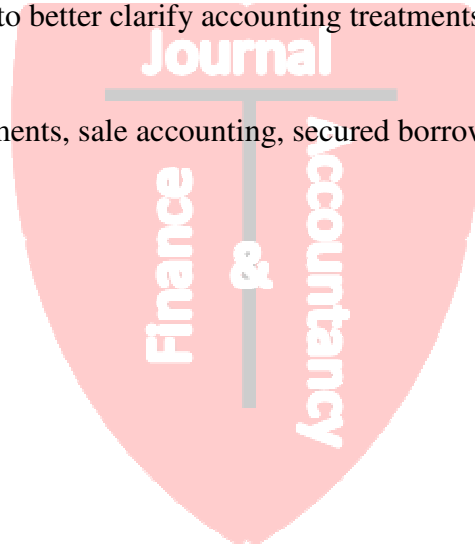
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ABSTRACT

Repurchase agreements have been a source of debate in the last few years. In June 2014, the FASB released Transfers and Servicing (Topic 860), Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures as an amendment to the FASB Accounting Standards Codification. This paper attempts to discuss the origin of repurchase agreements, financial statement manipulations using repurchase agreements, actions the FASB has taken to modify financial reporting standards to better clarify accounting treatments, and identify potential remaining accounting issues.

Keywords: repurchase agreements, sale accounting, secured borrowings, repo-to-maturity, repo market



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INTRODUCTON

Financial reporting standards have been the focus of harsh criticism over the last few years as the economy has stalled. Many have assigned blame to lax accounting standards for allowing deceitful and dishonest practices to take place in the financial industry. Meanwhile, some have contended that the collapse of the financial industry in 2008 was due to overly complex financial standards which allowed open-interpretation by companies. This paper will examine one area of financial reporting in particular which has received criticism in recent years, repurchase agreements (“repos”). More specifically, we will focus on repo transactions that were accounted for as sales versus secured borrowings, namely repurchase-to-maturity transactions. Over the last decade these transactions became the backbone of the modern financial system. Firms relied on repos to finance their everyday operations and this is why it is important to take a careful look at how we report these transactions. “Repo transactions are not simply a minor esoteric backwater of the financial system for which rough and ready accounting will suffice. The repo market is at the heart of the global financial system” (Chircop, Vicky Kiosse and Peasnell 2012).

The objective of this research paper is to determine how firms used repos to manipulate financial reporting and improve financial positions, what deficiencies in the prior accounting treatment allowed these companies to manipulate their financial statements, and how the FASB addressed those deficiencies. As with most accounting reform, the motivation to improve accounting for repurchase agreements stems from a perceived failure by the FASB to adequately set forth clear guidelines for reporting of these transactions.

According to data from the Federal Reserve, there was \$4.5 trillion of fixed income securities financed with repos by 2008 (Gorton and Metrick 2012). This report also aims to determine what kind of impact the FASB’s changes will have on industries that engage in repurchase agreement transactions.

THE BASICS OF REPURCHASE AGREEMENTS

A repurchase agreement, also known as a “repo” is defined as “a form of short-term borrowing for dealers in financial assets (historically government securities). The dealer sells the financial assets to investors, while simultaneously agreeing to buy back the security at a specified price and specified time, typically on a short-term basis” (Garbade and Fleming 2003). See Appendix for illustration.

Fundamental to these instruments are a fixed buy and sell price coupled with a specified short term settlement date. The duration of the transaction is typically overnight but rarely no more than 14 days. In essence the structure of the transaction has the look and feel of a collateralized loan. (Federal Reserve Bank of New York 2007).

According to Statement of Financial Accounting Standards (SFAS) 140 effective April 2001, the above transaction could be treated as either a secured borrowing or as a sale typically accompanied by a forward purchase agreement.

The standard defines a repurchase-to-maturity transaction as “a repurchase agreement in which the settlement date of the agreement to repurchase a transferred financial asset is at the maturity date of that financial asset and the agreement would not require the transferor to reacquire the financial asset” (FASB 2014).

PRIMARY USERS

Although many individuals and businesses indirectly benefit from the repo market by their use of money market and sweep accounts the parties directly involved in the repo agreements is generally limited to financial services entities. A typical repo transaction involves a borrower and a lender (seller and buyer). Central banks, hedge funds, mutual funds, broker dealers, and commercial banks are typical participants in these transactions. Other non-bank financial organizations have begun to enter the repo market since the financial crisis of 2008. These risk averse institutions with excess cash are entering the market primarily because of the attractiveness of the features associated with the repos. Examples include pension funds, endowments, corporate treasuries, and insurance companies (International Capital Market Association n.d.).

ADVANTAGES OF REPOS

The major advantages of participating in repo transactions flow directly from the use of government securities as collateral. The investor encounters very little risk that the dealer will refuse to honor the securities at the time of the repurchase. On the other hand, the dealer likes the ease with which the securities can be transferred. Most securities are held merely as bookkeeping entries at the Federal Reserve Bank, enabling them to be exchanged over the federal wire without any physical delivery. Consequently, repo transactions, which can be completed very quickly, provide sophisticated investors with features they seek most: liquidity, security, and good returns on their investments (Schatz1987). The borrower typically receives a lower interest rate than the market long-term rate because of the unique features of the repo agreement, namely quality of collateral and short duration of the transaction. The lender benefits by being able to invest excess cash and earn a return on a short-term basis with very low risk of default.

IMPORTANCE OF REPURCHASE AGREEMENTS IN FINANCIAL MARKETS

Repurchase Agreements play key roles in the allocation of resources in financial markets. They provide an opportunity for financial institutions such as banks or mutual funds to lend excess funds on a short term basis in a secure manner. From the borrower's perspective, the Repurchase Agreements provide a relatively low cost source of short term financing. "The importance of the repo market is suggested by its immense size: dealers with a trading relationship with the Federal Reserve Bank of New York—so-called primary dealers—reported financing \$2.48 trillion in Treasury, agency, mortgage-backed, and corporate securities at the end of 2002 with RPs" (Garbade and Fleming 2003).

HISTORY

Repos have been in use since the early 1900's by Federal Reserve Banks to make loans to member banks. Although the Great Depression and World War II curtailed their use, they began to reemerge as a result of monetary policy in early 1950's (K. D. Garbade 2006).

In the early 1980s a few government securities dealers became insolvent and caused themselves and the other party engaged in the repurchase agreement with them to go bankrupt.

After this happened, many companies began to seek greater credit protection and forced some change in the way repurchasing transactions were structured and secured. The result of this change was the birth of the tri-party repurchase agreement. “In a tri-party repurchase agreement, an ‘agent bank’ stands between the dealer and the creditor. A previously negotiated contract among the bank, the dealer, and the creditor describes the acceptable securities and the margins required on the securities. At the start of a repo, the dealer delivers securities, and the creditor delivers funds, to the bank. After verifying that the securities are acceptable and have a market value that exceeds the principal amount of the repo by more than the required margin, the bank releases the funds to the dealer but continues to hold the securities as the creditor’s custodial agent. At the end of the repo, the dealer returns the principal—plus interest at the negotiated rate—to the bank, the bank releases the securities back to the dealer, and the bank remits the principal and interest to the creditor” (K. D. Garbade 2006). In 1983, the FASB issued statement No. 76, Extinguishment of Debt, and No. 77, Reporting by Transferors for Transfers of Receivables with Recourse to help guide and direct those who used repo agreements. In 1996, statement No. 125 Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities was issued further defining the reporting of transfers by saying “A transfer of financial assets in which the transferor surrenders control over those assets is accounted for as a sale to the extent that consideration other than beneficial interests in the transferred assets is received in exchange. The transferor has surrendered control over transferred assets if and only if all of the following conditions are met:

1. The transferred assets have been isolated from the transferor- put presumptively beyond the reach of the transferor and its creditors, even in bankruptcy or other receivership.
2. Either (1) each transferee obtains the right-free of conditions that constrain it from taking advantage of that right-to pledge or exchange the transferred assets or (2) the transferee is a qualifying special-purpose entity and the holders of beneficial interests in that entity have the right-free of conditions that constrain them from taking advantage of that right-to pledge or exchange those interests.
3. The transferor does not maintain effective control over the transferred assets through (1) an agreement that both entitles and obligates the transferor to repurchase or redeem them before their maturity or (2) an agreement that entitles the transferor to repurchase or redeem transferred assets that are not readily obtainable” (Financial Accounting Standards Board 1996).

In addition “Statement No.125 supersedes FASB Statements No. 76, Extinguishment of Debt, and No. 77, Reporting by Transferors for Transfers of Receivables with Recourse. This Statement amends FASB Statement No. 115, Accounting for Certain Investments in Debt and Equity Securities, to clarify that a debt security may not be classified as held-to-maturity if it can be prepaid or otherwise settled in such a way that the holder of the security would not recover substantially all of its recorded investment. This Statement amends and extends to all servicing assets and liabilities the accounting standards for mortgage servicing rights now in FASB Statement No. 65, Accounting for Certain Mortgage Banking Activities, and supersedes FASB Statement No. 122, Accounting for Mortgage Servicing Rights. This Statement also supersedes Technical Bulletins No. 84-4, In-Substance Defeasance of Debt, No. 85-2, Accounting for Collateralized Mortgage Obligations (CMOs), and No. 87-3, Accounting for Mortgage Servicing Fees and Rights.” (Financial Accounting Standards Board 1996).

In 2000, the FASB issued Statement No.140 which “revises the standards for accounting for securitizations and other transfers of financial assets and collateral and requires certain disclosures, but it carries over most of Statement No.125’s provisions without reconsideration” (Summary of Statement No. 140). Statement No.140 also included a significant implementation guideline (§218 of FAS 140):

“The Board also decided that the transferor's right to repurchase is not assured unless it is protected by obtaining collateral sufficient to fund substantially all of the cost of purchasing identical replacement securities during the term of the contract so that it has received the means to replace the assets even if the transferee defaults. Judgment is needed to interpret the term substantially all and other aspects of the criterion that the terms of a repurchase agreement do not maintain effective control over the transferred asset. However, arrangements to repurchase or lend readily obtainable securities, typically with as much as 98 percent collateralization (for entities agreeing to repurchase) or as little as 102 percent overcollateralization (for securities lenders), valued daily and adjusted up or down frequently for changes in the market price of the security transferred and with clear powers to use that collateral quickly in the event of default, typically fall clearly within that guideline. The Board believes that other collateral arrangements typically fall well outside that guideline” (Ketz 2011).

This bright line rule noting specifically a variance beyond 98% and 102% was taken advantage of by Lehman Brothers years down the road.

LEHMAN BROTHERS AND REPO 105

In 2008, at the onset of the most recent financial collapse repos were at their height. Lehman Brothers had used these types of transactions to help their financial statements look healthier than they were. Lehman classified a significant number of repurchase agreements as sales and justified this accounting by meeting the criteria of an internally generated transaction policy dubbed “Repo 105.” By classifying the transaction as a sale versus a secured borrowing, Lehman was able to use proceeds from repo transactions to move billions of dollars’ worth of debt off of its balance sheet for short periods of time. The effect was to improve Lehman’s leverage ratios. There were many reasons Lehman found repos to be attractive. The fact that repo agreements are often completed in one day was one reason. Other reasons include very little risk of the collateral losing value based on the short term duration of the agreement and low interest rates because of the collateralization of the instrument. In effect, Lehman could lower its overall borrowing costs by using a series of repos versus utilizing other long term financing arrangements. (University of Pennsylvania 2010).

Complexity within the standard left a loophole which was then exploited by brokerage firms. Some of the assets that Lehman used to collateralize the repo 105 transactions were nongovernmental securities (including mortgage backed securities). This essentially allowed Lehman to temporarily move toxic assets off the balance sheet. The loophole allowed Lehman to recognize the repos as sales instead of loans, permitting the firm to remove the security from its balance sheet. Without the benefit of this “accounting trick” Lehman’s insolvency may have been evident to shareholders much sooner than in 2008. Lehman was able to move \$50B worth of risky assets off of its balance sheet by utilizing this accounting tactic (University of Pennsylvania 2010).

In FAS 140, paragraph 218 provides guidance for when it is acceptable to treat this transaction as a sale and not as a secured borrowing. The FASB asserts that the “transferor's

right to repurchase is not assured unless it is protected by obtaining collateral sufficient to fund substantially all of the cost of purchasing identical replacement securities during the term of the contract so that it has received the means to replace the assets even if the transferee defaults.” The FASB then granted firms the ability to use judgment in order to determine what level of collateral constitutes “substantially all” of the cost. The standard provides a range of between 98% and 102% as a guideline. (§218 FAS 140). Lehman Brothers manipulated this rule by selling its assets with an agreement to buy them back for 105% of their sales price. This provided Lehman with satisfaction that they were acting within the scope of the standard. In addition to complying with accounting standard, Lehman structured the transactions to occur and comply with United Kingdom commercial law. If the transaction were conducted within the United States commercial law would not have allowed sale treatment. Just as Enron used special-purpose entities to hide the extent of its indebtedness from its shareholders, Lehman Brothers was able to accomplish the same goal using repo 105. “Indeed, the usage of the Repo 105 transactions, as attested by internal Lehman Brothers discussions, served no economic purpose other than to improve financial statements” (Jones 2013).

In 2008, purchasing firms became concerned over the quality of collateral they received in these repos transactions. The market for repos became more volatile and rates rose, which eventually forced investment firms out of the repo market altogether (Chircop et al 2012). Once these firms were unable to access capital through the repo market, they were forced to liquidate more substantial assets and their insolvency became evident to analysts and investors.

MF GLOBAL AND “REPO-TO-MATURITY”

Years after the collapses of Lehman Brothers and Bear Sterns, another company collapsed in part due to abuses of repo rules. MF Global, a cash and derivatives broker-dealer led by former N.J. governor Jon Corzine, was able to utilize repo transactions in a different way than Lehman Brothers had in order to make the company appear more profitable. MF Global is alleged to have invested in European sovereign debt and then used the debt as collateral for financing at an interest rate which was lower than the yield of the bond. This essentially allowed MF Global to borrow money while recording a profit on the series of transactions. The company would invest in European bond and then use the same as collateral in a repo agreement. Typically the bonds would earn a higher rate of interest than the borrowing costs associated with the repo agreement. (Eavis 2012).

By use of this interest rate arbitrage, MF Global was able to almost instantly record a profit on their trade. MF Global was able to record the difference between what the repo loan would cost the company and what they would receive from European sovereign debt on their balance sheet without having to fully disclose the extent of the financing arrangement. The lending firms faced an issue when both the European creditors as well as MF Global became insolvent.

FASB UPDATE

On June 12, 2014 the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-11, Transfers and Servicing (Topic 860): Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures. The purpose of this standard is to provide clarity and improve the financial reporting of repurchase agreements and other similar transactions. “The new guidance aligns the accounting for repurchase-to-maturity transactions

and repurchase agreements executed as a repurchase financing with the accounting for other typical repurchase agreements. Going forward, these transactions would all be accounted for as secured borrowings. The guidance eliminates sale accounting for repurchase-to-maturity transactions and supersedes the guidance under which a transfer of a financial asset and a contemporaneous repurchase financing could be accounted for on a combined basis as a forward agreement, which has resulted in outcomes referred to as off-balance-sheet accounting. The new guidance also brings Generally Accepted Accounting Principles (GAAP) into greater alignment with International Financial Reporting Standards (IFRS) for repurchase-to-maturity transactions” (FASB 2014).

The new Standard also requires expanded disclosure to add transparency regarding the nature of a transferor’s repurchase agreement transactions. Disclosed repo transactions are now required to be classified by transaction type. Significant disclosures include carrying amount, proceeds, ongoing exposure, collateral, risk assessment and financial statement impacts (FASB 2014).

EFFECTIVE DATE

For public companies the accounting changes will be effective for the first interim or annual period following December 15, 2014. The disclosure modification changes are effective for reporting periods beginning on or after March 15, 2015.

NEW GAAP VERSUS CURRENT IFRS

International Financial Reporting Standard’s viewpoint of repurchase agreements is one of “who retains the risks and rewards?” If the transferor carries most of the risks and rewards, then the transferor would recognize continual control of the financial asset, and thus, the transaction would be accounted for as a ‘secured borrowing’. In reverse, if the transferee carried all of the risks and rewards of that financial asset, the accounting treatment would be presented as a ‘sale’ on the books of the transferor.

The new GAAP rules mainly go off the three provisions as previously mentioned in the History section to characterize repo agreements as secured borrowings. The criterion of “control” is used by GAAP, rather than the IFRS definition of “risk and reward”. The legal control must be given up by the transferor for the repo agreement to be treated as a “Sale”. In reverse, if the control is not completely given to the transferee, the repo agreement is met as a “Secured Borrowing”.

Both the new GAAP and current IFRS rules aim to treat repurchasing agreements as secured borrowings. The goal of each is to clearly represent the agreements and their intentions by the transferors with little or no uncertainty. The IFRS’s requirements aim for:

- “(1) repurchase agreements and securities lending transactions that provide the transferee with a right to substitute assets that are similar and of equal fair value to the transferred financial assets’ at the repurchase date,
- (2) cash-settled forward repurchase agreements that involve the return of an amount of cash equal to the repurchase-date fair value of the transferred financial assets, and
- (3) a sale of a financial asset with a total return swap, as described by the guidance” (Financial Accounting Standards Board 2013).

BENEFITS AND COSTS OF THE NEW UPDATE

Although it is difficult to measure both the costs and benefits of the new rules, it was determined by the FASB that the benefit will outweigh the costs of the changes. Through the prior accounting treatment, companies were able to bend the accounting rules to give the impression of stronger financial statements. Lehman had over \$50 billion in “Repo 105” transactions at the time they declared bankruptcy. MF Global had \$13.1 billion in repurchase movements. It is not feasible to quantify the shareholder dollar amounts that relate to this “accounting trick”, however the billions of dollars from just these two examples is certainly material. There is no substantial evidence yet of how many companies took advantage of the prior accounting treatment for repo agreements to the extent of Lehman Brothers and MF Global. The costs may be considerable to companies at the onset of the new accounting changes in the millions of dollars, but in the long run, shareholder value will be positively benefited from these new accounting changes for repurchase agreements.

RESPONSES TO TRANSFERS AND SERVICING (TOPIC 860)

Critics of the earlier accounting treatment for repos have made arguments for why they wanted to see reform for years. Elizabeth M. Osenton argued as far back as 1987 about the need for reform in the accounting for repurchase agreements. Because of a series of bank and security dealer failures she suggest that the repo market is not as secure as it appears. Additionally, the lack of consistent accounting treatment has “created uncertainties in the repo market” (Osenton 1987). In an article from October 2012, credit ratings agency, Fitch, called for more disclosure in repo transaction collateral. “[R]epo collateral disclosure practices could be materially improved. As an example, required disclosures related to collateral in repo transactions often lack tranche or security-specific information” (Grossman et al. 2012).

As part of the standard setting process, Twenty-three comment letters were submitted to the FASB concerning the proposal. “Most respondents agreed with the Board’s proposal to change the accounting for the repurchase-to-maturity transactions but had concerns about the nature of the amendments to the effective control guidance for derecognition of financial assets. Others disagreed with some aspects of the proposal. The Board considered those comments during its re-deliberations leading to this Update” (FASB 2014).

The first comment letter viewed the proposed changes positively. Chris Barnard, who has commented on numerous FASB, PCAOB and IASB exposure drafts, stated, “the proposed amendments represent an improvement in financial reporting. The proposals effectively and proportionately address stakeholders’ stated concerns, reduce complexity, and to some extent increase internal consistency and comparability between U.S. GAAP and IFRS” (Barnard 2011). He proceeds to laud the FASB for addressing shareholder interests, while not “undermining the “principles of the derecognition framework.” Barnard also contends that the FASB has done well to “help clarify” certain provisions which were historically vague, such as the “substantially-the-same” issue involving collateral.

In a separate comment letter Edward W. Trott, a former member of FASB’s Emerging Issues Task Force, argues that the draft does not do enough to address the real issues involved with repo accounting and is a “band aid that will lead to more inconsistencies... and confusion” (Trott 2013). Trott cites numerous complexities and inconsistencies which result in similar

transactions recorded in dissimilar ways. He also provides an example of how repo to maturities can be unreliable, “[t]he band aid causes the transferred bond to continue to be reported on the reporting entity’s balance sheet even though the reporting entity has no right to the cash flows of the ... bond and cannot direct how the bond is used” (Trott 2013). Trott suggests clarifying the definition of control pertaining to financial assets like securities. He believes by doing so, the necessity for firms to use professional judgment will be diminished and reporting will become more consistent.

The FASB vote was for approval of the standard was six affirmative with one dissent, Mr. Tim Lindsmeier. The dissenting vote raises valid questions about the faithful representation of the financial asset on the balance sheet. The transferred asset in a repurchase agreement is legally the asset of the transferee. However, under secured borrowing accounting as mandated by the new standard, the financial asset also remains on the books of the transferor. This leads to “double counting” – both parties retain the same asset on their books while complying with U.S. GAAP.

CONCLUSION

Repurchase agreements are part of the backbone of the finance industry, albeit a complicated one. Past loopholes in the accounting treatment helped prolong the imminent decline of two prominent investment banks. The magnitude of active repurchases in the capital market is staggering and it is for this reason that action was taken to ensure accounting treatments for these transactions accurately present firms’ true financial positions. The new accounting treatment changes to the transactions are a good start, but there are still areas that can be improved, e.g. the notion of double booking. Regulators must be vigilant to ensure all firms present their financial positions fairly and in accordance with their prescribed GAAP. Lehman Brothers and MF Global should provide as examples where following the letter of the law regarding accounting standards, may not be following the spirit of the law.

REFERENCES

- Chircop, Justin, Paraskevi Vicky Kiosse, and Ken Peasnell. "Should Repurchase Transactions be Accounted for as Sales or Loans?" *Accounting Horizons*, 2012: 657-679.
- Eavis, Peyer. "MF Global and the Risks Looming in the Repo Market." *The New York Times*, June 5, 2012.
- Federal Reserve Bank of New York. *Repurchase and Reverse Repurchase Transactions*. August 2007. Retrieved from <http://www.newyorkfed.org/aboutthefed/fedpoint/fed04.html> .
- Financial Accounting Standards Board. *FASB Pre-Codification Standards*. June 1996. Retrieved from <http://www.fasb.org/summary/stsum125.shtml> .
- Financial Accounting Standards Board. *FASB Improves Financial Reporting of Repurchase Agreements*. June 2014. Retrieved from http://www.fasb.org/cs/ContentServer?c=FASBContent_C&pagename=FASB%2FFASBContent_C%2FNewsPage&cid=1176164127256 .
- Financial Accounting Standards Board Transfers and Servicing (Topic 860) Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures. No. 2014-11 June, 2014.
- Financial Accounting Standards Board "Transfers and Servicing (Topic 860) Effective Control for Transfers with Forward Agreements to Repurchase Assets and Accounting for Repurchase Financings." *FASB.org*. January 15, 2013. Retrieved from <http://www.fasb.org/cs/BlobServer?blobkey=id&blobwhere=1175825664958&blobheader=application%2Fpdf&blobcol=urldata&blobtable=MungoBlobs>.
- Garbade, Kenneth D. "The Evolution of Repo Contracting Conventions in the 1980s." *Economic Policy Review*, May 2006: 27-42.
- Garbade, Kenneth D., and Michael J. Fleming. "The Repurchase Agreement Redefined: GCF Repo." *Current Issues in Economics and Finance*, 2003.
- Gorton, Gary, and Andrew Metrick. "Securitized Banking and the Run on Repo": *Journal of Financial Economics*, 2012: 425-451.
- Grossman, Robert, Viktoria Baklanova, and Bill Warlick. *Fitch Wire*. 2012. Retrieved from <http://www.fitchratings.com/web/en/dynamic/articles/Room-for-Improvement-in-Repo-Disclosure-Practices.jsp>.
- International Capital Market Association*. n.d. Retrieved from <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/frequently-asked-questions-on-repo/5-who-are-the-main-users-of-the-repo-market/> .
- Jones, Bryce. "Law and Accounting: Did Lehman Brothers use of repo 105 transactions violate accounting and legal rule?", *Journal of Legal, Ethical, and Regulatory Issues*, July 1, 2013.
- Ketz, J. E. "The Accounting Cycle - NY v. Ernst & Young: Did Lehman Bros. Follow GAAP?" 2011. *Lehman's Demise and Repo 105: No Accounting for Deception*. March 31, 2010. Retrieved from <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2464>.
- Liu, Chao Shin and Shaefer, Thomas F. "Assets Sales or Loans: The Case of Lehman Brothers' Repo 105s." *The Accounting Educators' Journal*, 2011: 79-88.
- Osenton, Elizabeth M. "The Need for a Uniform Classification of Repurchase Agreements: Reconciling Investor Protection with Economic Reality." *The American University Law Review*, 1987: 669-691.

Schatz, Howard R. "The Characterization of Repurchase Agreements in the Context of the Federal Securities Laws." *St. John's Law Review*, 1987.

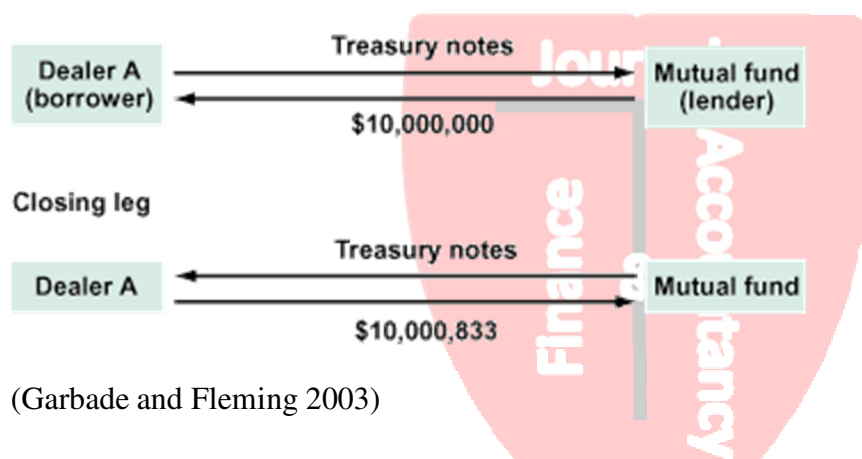
Trott, Edward W. "FASB.org." February 4, 2013. Retrieved from <http://www.fasb.org/cs/BlobServer?blobkey=id&blobwhere=1175825893180&blobheader=application/pdf&blobcol=urldata&blobtable=MungoBlobs>.

University of Pennsylvania, Wharton School of Business (March 31, 2010) *Leman's Demise and Repo 105: No Accounting for Deception*. *Knowledge@Wharton*. North America. Retrieved from <http://knowledge.wharton.upenn.edu/article/lehmans-demise-and-repo-105-no-accounting-for-deception/>.

Valukas, A. (2010, Mar. 11). Examiner, In re Lehman Brothers, Ch. 11, Case No 08-13555 (JMP), U.S. Bankruptcy Court, S.D. NY, Vol. 3. Retrieved from <http://www.jenner.com/lehman/VOLUME%203.pdf>

APPENDIX

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(Garbade and Fleming 2003)