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# THE WEEKEND THAT CHANGED WALL STREET

On the afternoon of Sunday, September 14, 2008, Dick Fuld, a seasoned Wall Street veteran and longstanding CEO of Lehman Brothers Holdings, Inc. (Lehman Brothers), was effectively out of options to save his once-proud 158-year-old investment bank.

Fuld had been working the phones the entire weekend in a desperate attempt to find a buyer for the struggling investment bank, which now faced billions of dollars in write-downs from bad mortgage-related investments. Bank of America CEO Ken Lewis had notified Fuld the previous Friday that federal help was needed before his bank could negotiate a deal because the Lehman Brothers real-estate portfolio was in worse shape than expected and, consequently, the firm's liabilities most likely exceeded its assets.[1] At the time, Fuld did not know that Lewis was already in serious discussions with Merrill Lynch CEO John Thain to purchase one of Lehman Brothers' largest rivals.

Then, in a call from the New York Fed, Fuld received the news that Barclays would agree to buy Lehman Brothers as long as it didn't have to take on Lehman Brothers' struggling real-estate portfolio. The Fed explained that it would accomplish this by creating a separate company to hold the soured assets, which would be supported by capital provided by a syndicate of banks and brokers. But, although all Barclays needed was a shareholder vote to secure the deal, one problem still lingered: There was no way to get that vote on a Sunday, and neither the United States nor the British government would back Lehman Brothers' trading balances until a vote could take place.

With nowhere else to turn, Fuld picked up the phone one last time to call Lewis at his home in Charlotte. Because all of his previous calls to Lewis had gone unreturned, he was surprised when Lewis's wife answered the phone but stunned when she told him: "If Mr. Lewis wanted to call back, he would call back."

A few hours later, in a meeting, Fuld and the Lehman Brothers' board of directors had a conference call with SEC Chairman Christopher Cox, who told them: "You have a grave responsibility, and you need to act accordingly." So, the meeting ended. Fuld sat back in his

[1] "The Weekend That Wall Street Died," *Wall Street Journal*, http://online.wsj.com/article/SB123051066413538349.html (accessed March 19, 2009).

chair, looked at the board, and said: "I guess this is goodbye." Shortly afterward, Fuld was forced to accept that his firm, with its 25,000 employees, had no other option but bankruptcy. So, at approximately 12:30 on the morning of Monday, September 15, 2008, a press release went out from Lehman Brothers announcing its intention to seek bankruptcy protection.[2]

## Lehman Brothers

Lehman Brothers, a giant in the global financial-services world, served the needs of corporations, governments and municipalities, institutional clients, and high-net-worth individuals. It provided a range of services that included investment banking, equity and fixed-income sales, trading and research, asset management, private investment management, and private equity. Operating primarily in the three business segments of investment banking, capital markets, and investment management, Lehman Brothers generated client-flow revenues from institutional, corporate, government, and high-net-worth clients by giving advice on and structuring transactions; serving as a market maker and/or intermediary in the global marketplace, which included having securities and other financial instrument products; originating loans for distribution to clients in the securitization or principals market; providing investment-management and advisory services; and acting as an underwriter to clients.[3]

## Commercial-Paper and Credit-Default-Swap Markets

Lehman Brothers was a major player in both the commercial-paper and credit-default-swap (CDS) markets. Because of the firm's position, its bankruptcy would have an unbearably onerous impact on these financial markets. As a funding intermediary, Lehman Brothers was one of the largest dealers in the commercial-paper market. Furthermore, Lehman Brothers' influence on the $55-trillion CDS market was threefold.

First, Lehman Brothers was a top-10 counterparty in the CDS market, with contracts amounting to roughly $800 billion.[4] Thus, it sold insurance to investors against the chance of other firms defaulting, and these firms were unable to pay their debt, so Lehman Brothers would have to pay the investors on the other side of the contract. Lehman Brothers' second exposure to the CDS market in general dealt with contracts on the firm's own debt and specifically with those who had sold insurance against the firm going into bankruptcy. Lehman Brothers' third impact on the CDS market was derived through synthetic collateralized debt obligations

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[2] "Life after Lehman Brothers," *New York Times*, http://www.nytimes.com/2008/09/16/business/16lehman.html (accessed February 19, 2009).

[3] Reuters, http://www.reuters.com/finance/stocks/companyProfile?symbol=LEHMQ.PK (accessed March 22, 2009).

[4] "Nightmare on Wall Street," *The Economist*, http://www.economist.com/finance/displa ystory.cfm?story_id=1223 1236&source=features_box_main (accessed March 23, 2009).

(CDOs).[5] Synthetic CDOs invested in CDSs, typically broken down into portions, or *tranches*, which were then sold to investors based on their level of risk appetite. The performance of a synthetic CDO was therefore based upon defaults insured by a CDS portfolio. In order to match each tranche with each investor's desired risk level, each tranche took the CDS default losses in a specific order, with the riskier tranches taking the losses before the senior tranches.[6] Each of these exposures to the CDS market resulted in significant counterparty risk or the risk that the party on the other side of the contract failed to pay its obligation to the opposite party.

## The Commercial-Paper Market

As part of the global money market, commercial paper was a short-term, unsecured fixed-income instrument issued by a corporation as a means to finance short-term debt obligations. With maturities usually fewer than 270 days, this short-term debt instrument was specifically used to finance operating expenses or current assets such as inventories or receivables rather than fixed assets such as land or buildings. Another important characteristic of commercial paper was that it was not backed by any form of collateral but rather by the issuers who promised to pay the face amount at the maturity of the paper. Consequently, only firms with investment-grade credit ratings had the capability to finance their short-term debt needs at a reasonable price.[7] By meeting these criteria, commercial paper was exempt from regulation by the Securities and Exchange Commission. The short-term nature of commercial paper and the creditworthiness of the issuers and borrowers resulted in its being deemed one of the most safe and liquid investments in the market. As a result, commercial paper traditionally comprised a very large part of money market funds as shown in **Exhibit 1**.

There were generally three parties that interacted with one another in the commercial-paper market. The issuers of commercial paper were the companies that needed to fund their short-term borrowing needs and consequently, they marketed commercial paper through one of the two avenues. The most direct method companies used to fund their short-term needs using commercial paper was to sell directly to investors that, as previously mentioned, were mostly money market funds. Alternatively, issuers could sell their commercial paper to an intermediary, usually a large financial institution, which then turned around and sold the paper in the open market. Selling commercial paper directly saved the issuer from paying a dealer fee of approximately five basis points; however, direct issuance was usually only done by large financial firms that had large short-term borrowing needs.

Perhaps more than other features, the absence of commercial paper regulation may have resulted in significant growth of the market by providing advantages for issuers and investors alike. **Exhibit 2** shows the total weekly U.S. commercial paper outstanding and illustrates the

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[5] "A Nuclear Winter," *The Economist,* http://www.economist.com/finance/displaystory.cfm?story_id=12274112 (accessed March 23, 2009).

[6] *The Lehman Brothers: Guide to Exotic Credit Derivatives*, QuantFinanceJobs.org (accessed April 7, 2009).

[7] Investopedia.com (accessed March 22, 2009).

substantial growth in the market. Note that the sharp decline in commercial paper outstanding that took place between 2008 and 2009 represents Lehman Brothers' collapse and the simultaneous drying up of the market.[8]

**CDSs**

A CDS involved the transfer of credit risk associated with debt by allowing the buyer—usually the owner of the debt—protection against default and credit-rating downgrades. In return for a series of periodic payments, the seller of the contract assumed this credit risk and was only obligated to pay if the company defaulted. In this manner, a CDS acted as insurance for the buyer because the buyer paid a premium for protection against default, similar to that paid for insurance protection and, in return, received a lump sum whenever a negative credit event occurred with respect to the underlying instrument.

**Lehman Brothers' Downfall and Its Effect on the Financial Markets**

The Lehman Brothers bankruptcy on September 15, 2008 had a far-reaching impact on investors, resulting in a seismic shock to financial markets around the world. The Fed's decision not to back the struggling investment bank resulted in investors losing confidence in the model that had long been the backbone of the American financial system. As investors flocked toward the relative safety of Treasury bonds, stock markets plummeted around the world, crude oil fell sharply below its summer highs, and the dollar fell drastically. Both the sheer size of Lehman Brothers and its interconnectedness to other financial firms and companies worldwide effectively created a credit event that far surpassed the magnitude of any ever seen. Furthermore, by allowing such an important financial institution to go into bankruptcy, the Fed shattered the widely held belief that such firms were too big to fail.

Unlike the Fed's prior decision to back the sale of Bear Stearns to JPMorgan in March 2008, which created a moral hazard in the industry by leading bank executives and investors alike to believe that the Fed would not let any similar financial institution fail, the decision on Lehman seemed to challenge that notion. This was especially evident in the commercial-paper market, where investors, strongly concerned about the bank's health and stability, were cautious about buying commercial paper from Bear Stearns for several quarters when its future was uncertain but, after the bailout, did not hesitate to buy commercial paper from Lehman Brothers even as its health waned (**Exhibit 3**).[9]

[8] Thomas K. Hahn, Timothy Q. Cook, and Robert K. Laroche, "Commercial Paper," *Instruments of the Money Market* (Richmond, VA: Federal Reserve Bank of Richmond, 1993), 106–07.

[9] "Why Letting Lehman Go Did Crush the Financial Markets," *Financial Times*, http://ftalphaville.ft.com/blog/2009 /03/12/53515/why-letting-lehman-go-did-crush-the-financial-markets/ (accessed March 30, 2009).

The Fed's decision to let Lehman Brothers fail after investors had assumed an ultimately false sense of security had seismic consequences, resulting in what was potentially the largest meltdown in the history of the commercial-paper market. The Reserve Primary Fund, a large money market fund that had invested largely in commercial paper issued by Lehman Brothers, "broke the buck" (i.e., its net asset value dropped below $1 per share thereby resulting in an asset value lower than the dollar amount deposited). This single event created a ripple effect in the commercial-paper market because investors who previously deemed the funds as safe investments pulled their money to place it in safer short-term investments, such as Treasuries, and in money market funds, which had stopped buying commercial paper in the hopes of regaining investor confidence. Because these funds were the largest buyers of commercial paper, their reluctance to buy effectively resulted in the drying up of the commercial-paper market.[10] As shown in **Exhibits 4** and **5**, the market for commercial paper dropped nearly $500 billion within a week of the Lehman Brothers' collapse as investors flocked toward the relative safety of government securities.

Another important implication of the Fed's decision to let Lehman Brothers fail involved the CDS market. With Lehman Brothers as top-10 counterparty in the huge market for CDSs, holding contracts with a notional value of roughly $800 billion, allowing such a deeply involved financial institution to fail infused huge counterparty risk into the market. On Sunday, once it became clear that there was no hope for the distressed company, the bank's investors and trading partners began to gauge their exposure, trying to mitigate their risk in the firm's default.[11] As investors tried to protect themselves from this counterparty risk, CDS spreads—the annual insurance premium paid to insure a bond against default—spiked (**Exhibit 6**).

## Evolution of the CDS Market and Demise of Lehman Brothers

As previously mentioned, CDSs were originally created to lower financial institutions' exposure to risk by providing credit insurance on bonds against default. As with any financial innovation, the market grew and evolved, from one in which CDSs were used as insurance to one in which they became speculative instruments that allowed investors to essentially bet on a company's default. Because of this increased speculation, the CDS market grew exponentially as shown in **Exhibit 7**.

George Soros, chairman of Soros Management Fund, described the misuse of these instruments as toxic, as with the bear-market raid that destroyed Lehman Brothers. Soros argued that, by buying CDS contracts, investors were effectively shorting bonds, which limited their exposure to risk, since only premiums were lost, but in the event a company went bankrupt, had the potential for unlimited reward. Nothing discouraged investors in CDSs with no direct

[10] "The Crisis and What to Do about It," *New York Review of Books,* http://www.nybooks.com/articles/22113 (accessed March 30, 2009).

[11] Markus K. Brunnermeier, "Deciphering the Liquidity and Credit Crunch 2007–2008," http://ssrn.com \abstract= 1317454 (accessed April 8, 2009).

exposure to the underlying bonds from creating a self-fulfilling prophecy. Hence it was Soros's recommendation to only allow for CDS purchase along with the underlying exposure (bond).

These dynamics resulted in huge speculation and consequently, tremendous growth in the CDS market not because investors expected a company to default but rather because they could earn substantial profits when CDS prices soared in response to a credit event. The CDS market represented a gap in traditional efficient market theory, where market prices actually reflected all available information. Soros argued that these instruments were actually mispriced and provided a biased view of the future, a theory he called *reflexivity*, which could be an accurate determinant of a company's fate. Because this reflexivity and the unlimited shorting of bonds via CDS contracts resulted in a bear-market raid on Lehman Brothers, the company's share price plummeted, and it was unable to raise capital. Therefore this capital inadequacy, resulting from pure speculation on the company's deteriorating conditions, played a large part in the firm's bankruptcy.[12]

## Conclusion

As Dick Fuld watched the events of the week unfold, he wondered what could have been done differently to prevent such catastrophic disruption in the financial markets. Should he have acted more quickly to find a buyer? If the Fed had decided to bail out Lehman Brothers, would continuing this moral hazard have caused the electronic run on banks to move on to the next financial institution and then to the next, resulting in a broad financial-sector bail-out?

As Fuld pondered these questions he realized that the once-prominent Lehman Brothers institution, after having injected huge amounts of *systemic risk*[13] into the system, had created an enormous loss of investor confidence in the world's financial institutions upon its collapse. He wondered if this one event would change the financial landscape for years to come.

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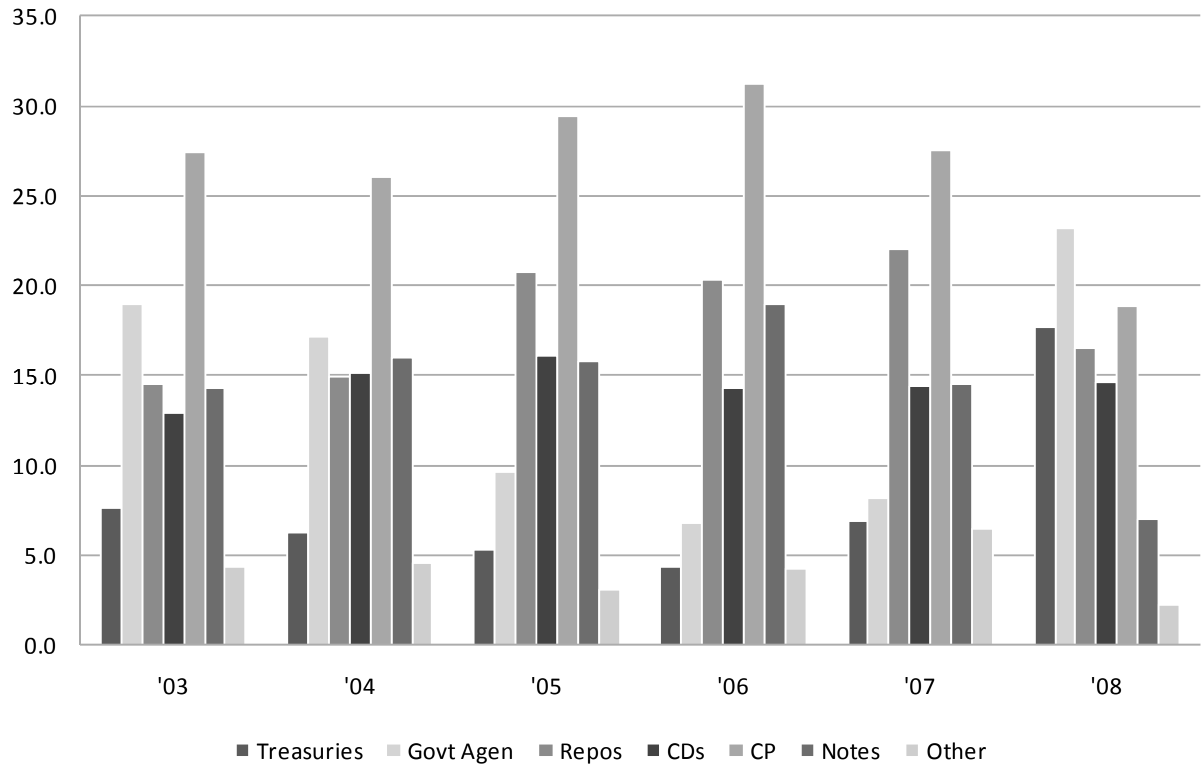
[12] George Soros, "One Way to Stop Bear Raids," *Wall Street Journal*, http://online.wsj.com/article/SB123785310594719693.html (accessed March14, 2009).

[13] Systemic risk is the collapse of an entire system or an entire market not specific to any one participant in that market. In the context of the Lehman Brothers collapse, systemic risk was the failure of the banking model.

Exhibit 1

**THE WEEKEND THAT CHANGED WALL STREET**

Asset Composition of Money Market Funds[1]

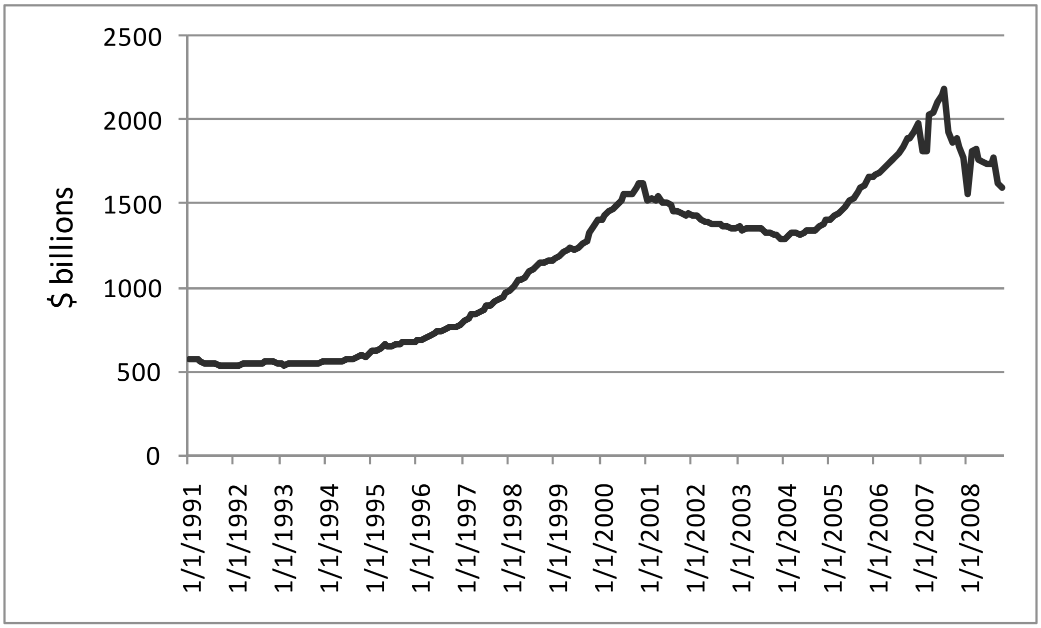



[1] Crane Data, January 31, 2009 (accessed April 13, 2009).

Exhibit 2

**THE WEEKEND THAT CHANGED WALL STREET**

Growth of Commercial Paper Market[1]

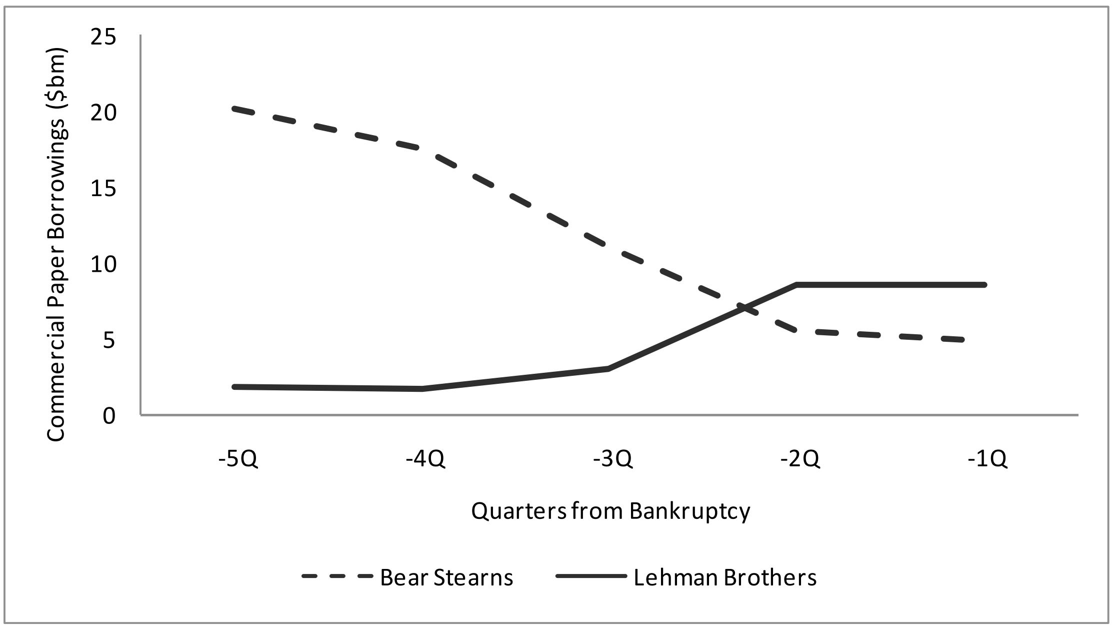



[1] Bloomberg (accessed April 27, 2009).

Exhibit 3

**THE WEEKEND THAT CHANGED WALL STREET**

Commercial Paper Borrowings from Bear Stearns and Lehman Brothers[1]

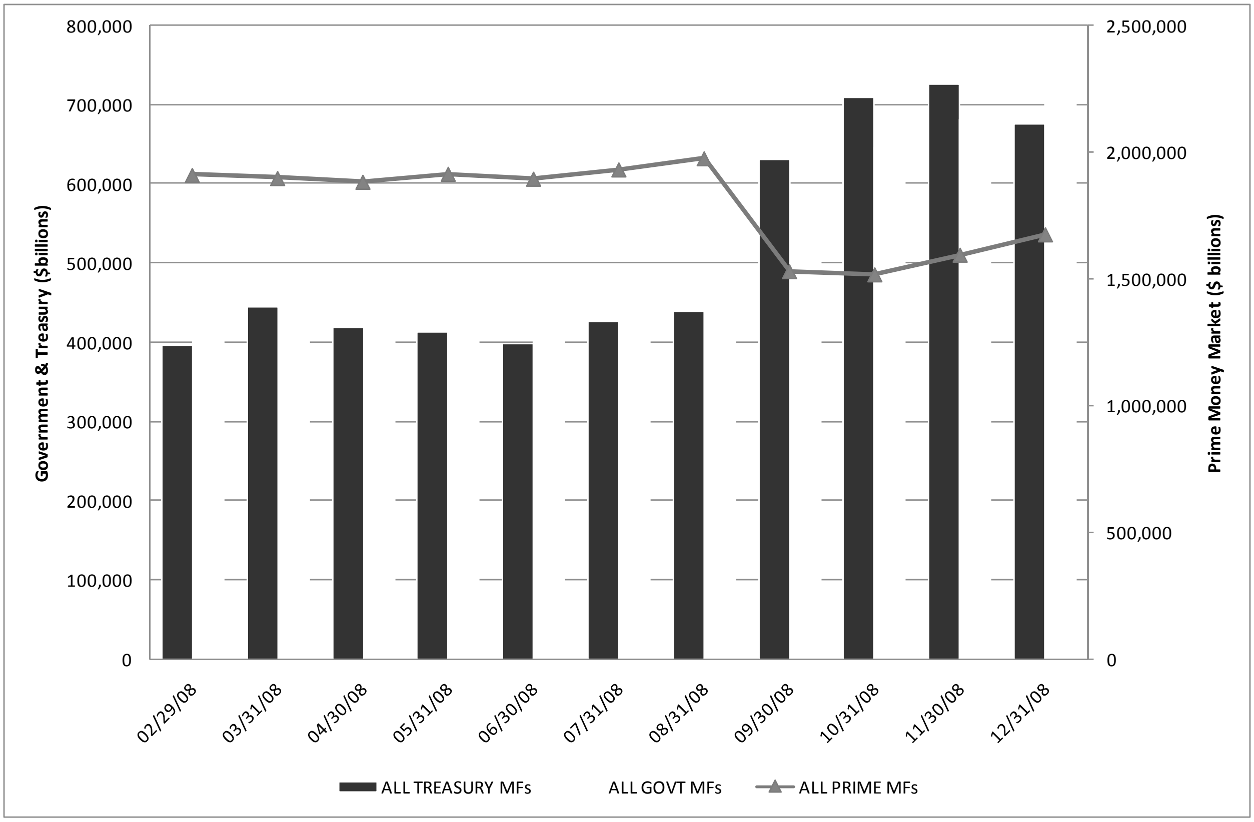



[1] Created by case writer with data from "Why Letting Lehman Go Did Crush the Financial Markets," *Financial Times*, http://ftalphaville.ft.com/blog/2009 /03/12/53515/why-letting-lehman-go-did-crush-the-financial-markets/ (accessed April 6, 2009).

Exhibit 4

**THE WEEKEND THAT CHANGED WALL STREET**

Investors Moving from Commercial Paper to the Relative Safety of Treasuries and Government Securities[1]

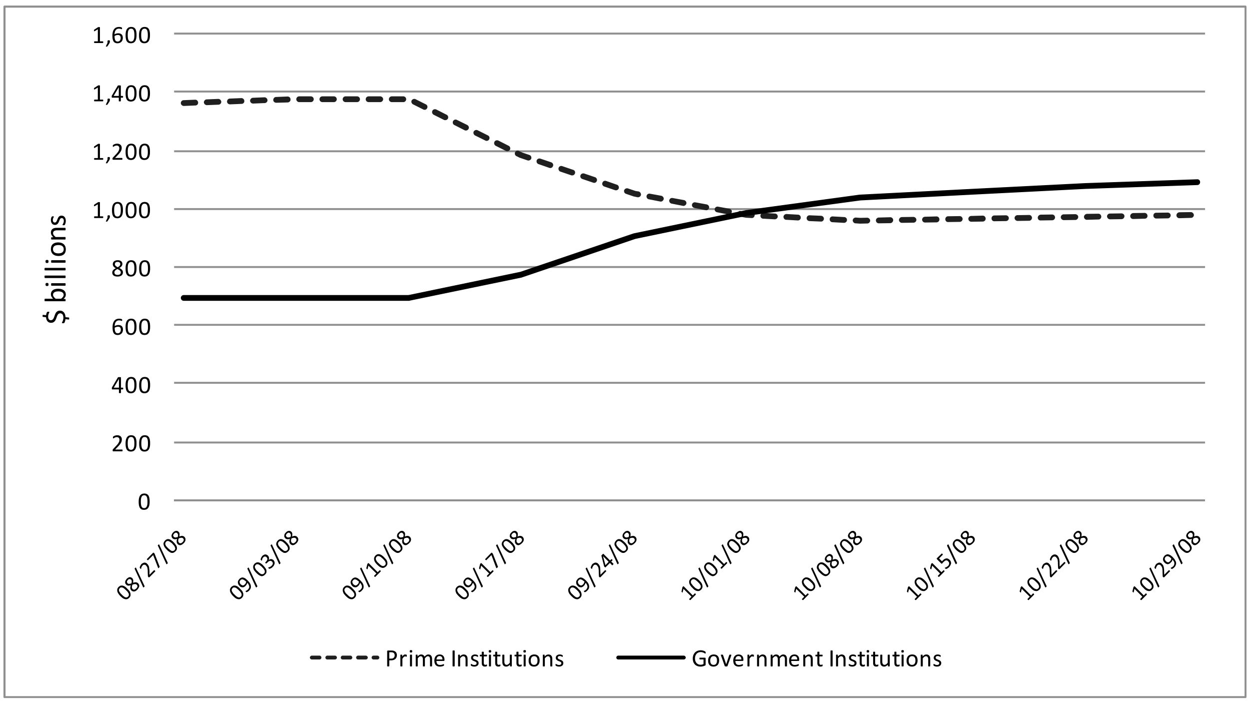



[1] Created by case writer with data from Crane Data (accessed April 13, 2009).

Exhibit 5

**THE WEEKEND THAT CHANGED WALL STREET**

Shift of Investors from Commercial Paper to Government Securities[1]

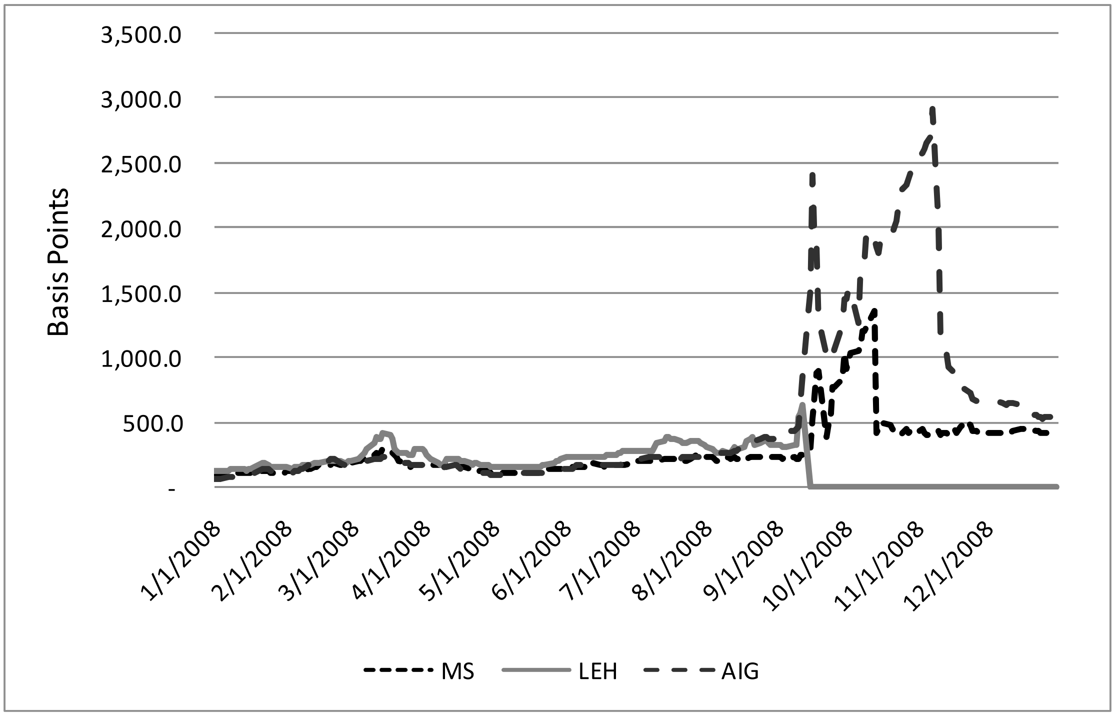



[1] Created by case writer with data from Crane Data (accessed April 13, 2009).

Exhibit 6

**THE WEEKEND THAT CHANGED WALL STREET**

Widening CDS Spreads[1]

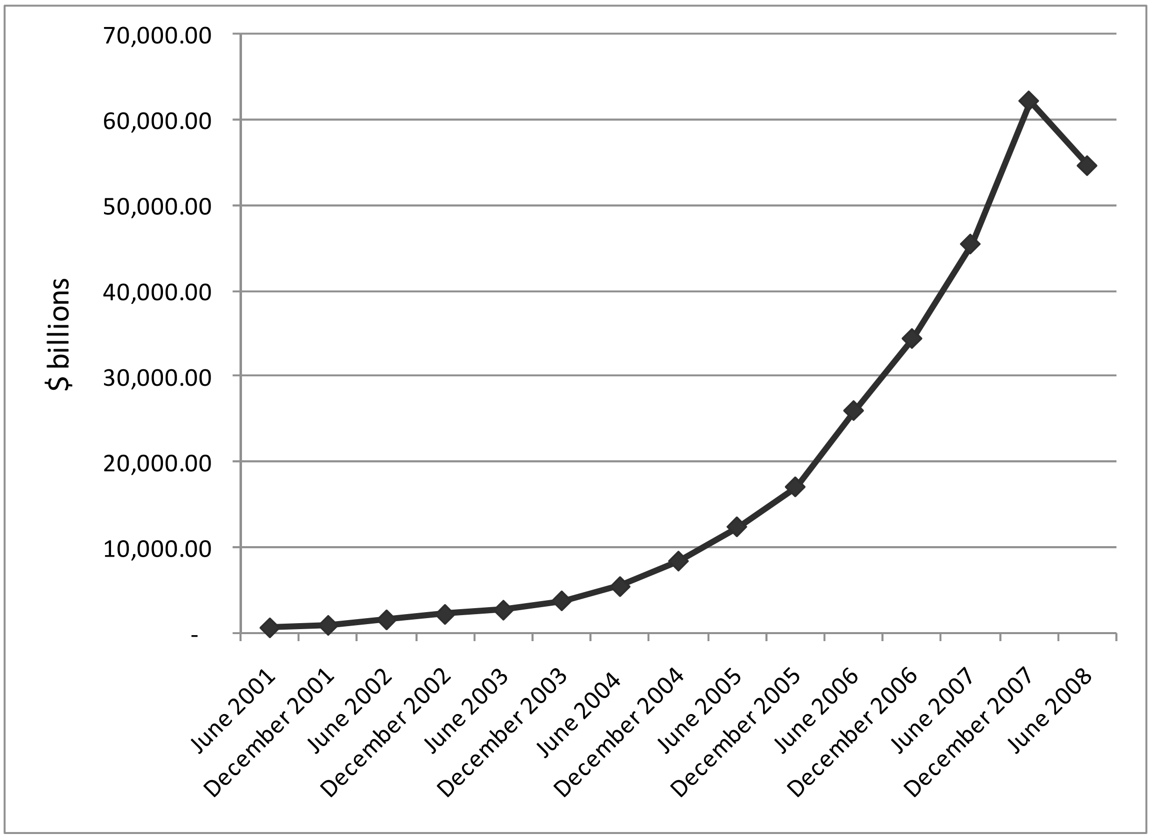



[1] Created by case writer with data from Bloomberg (accessed April 27, 2009).

Exhibit 7

**THE WEEKEND THAT CHANGED WALL STREET**

Growth of the CDS Market[1]




[1] Created by case writer with data from International Swaps and Derivatives Association (ISDA) Market Survey (accessed April 26, 2009).