

PART

I

The Business

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Extraordinary Markets

The euphoria of the equity and debt markets that caused investment banks like Bear Stearns, Merrill Lynch, and others to take massive proprietary and operational risks is gone. These risky assets were taken on leverage and as a result, the five major independent investment banks have been transformed, bankrupted, or acquired. Lehman Brothers went bankrupt. Merrill Lynch and Bear Stearns have been acquired by Bank of America and JPMorgan Chase respectively. The premier remaining prime finance firms, Goldman Sachs and Morgan Stanley, are no longer independent. The capital base of the investment banks was risked and lost. The critics and risk managers who warned of the hazards of mixing leverage with speculative investments were terminated, excluded, and vilified prior to the global financial crisis.

The euphoria of the markets, or euphoric episode, has historical precedence. Speculation has been here before and undoubtedly shall return again, whether it is “tulips in Holland, gold in Louisiana, real estate in Florida . . .”¹ Once the pendulum of diligence and risk management has swung in favor of a new technology, commodities, or new “riskless” financial instruments

¹ Galbraith, p. 2.

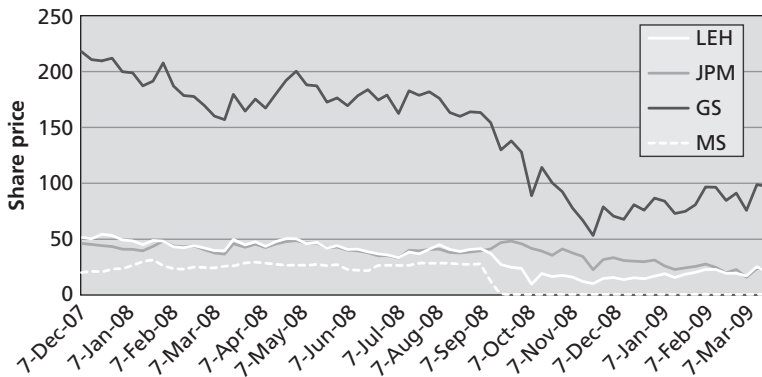


Figure 1.1 Leading Prime Brokers and Lehman

that offer easy wealth, then greed will undoubtedly rise in some new, unanticipated form. After all, the financial markets are driven by individuals with a vested interest in their success.

As the economist John Kenneth Galbraith noted, after the Great Depression, “the euphoric episode is protected and sustained by the will of those who are involved, in order to justify the circumstances that are making them rich. And it is equally protected by the will to ignore, exorcise or condemn those who express doubts.”²

However, to blame any one party for the global crisis is overly simplistic, and fails to identify the underlying factors and causes of the current financial crisis. It also fails to yield an understanding of how to reduce the probability of a recurrence or an even worse scenario. The speculation, leverage, and vulnerability of investment banks and financial firms was exposed by the crisis.³ The consequences of highly improbable scenarios were felt by all investment banks, prime brokers, and hedge funds in some form (see **Figure 1.1**).

² Galbraith, p. 11.

³ See Baquero & Verbeek, 2005.

Lessons Learned

Today the international economic environment of euphoria has been punctured. Investor and public confidence and trust in the financial system have eroded considerably. That is hopefully a polite way of saying that the bubble has burst, and we are left with the sober task of reviewing the lessons to avoid yet another crisis. A variety of different reports have reviewed the causes, factors, and effects of the financial crisis.⁴ In the financial crisis, we learned that:

- Investment banks can and do fail.
- The failure of investment banks, and prime brokers, threatens risks to hedge funds, investors, banks, and ultimately systemic failure.
- Hedge funds provide diversification (and some spectacular results), but do not provide absolute returns in bull and bear markets.
- Hedge fund and broker-dealer managers have been responsible for simplistic frauds on sophisticated clients and advisers.
- Ratings agencies have been unable or unwilling to assess risk accurately.
- Banking and securities regulators were not able to protect the public, investors, or the financial system even with extraordinary regulatory actions.
- Leveraged financing and a massive derivatives market pose a danger to the stability of major banks, financial institutions, insurance companies, pension funds, and even governments.
- Financial innovation and leverage are both important sources of financing but may pose individual, firm, and systemic risks.

⁴ Various international reports examined the causes and impact of the financial crisis, including *The Turner Review* (Turner, 2009) at Chapter 1, the various G-20 reports that attempt to address the multiple layers of the financial crisis including G-20, 2009a, 2009b, and 2009d; FSA discussion paper (FSA, 2009); A World Economic Forum Report, 2009.

- The assessment of risk has been misguided and systemic risks created by interlinkages have not been transparent or understood.

There was a slow chain of antecedents and consequents, causes and effects that impacted the global financial system. The financial reckoning took some time to arrive, but like a tsunami, it was foreseeable to those who looked for the signs, or had an interest in its arrival.⁵ The global economy has now contracted broadly and deeply. The current crisis in the global economy, financial markets, and international banking system is profound, with no simple solution.

Euphoria and Crisis

The euphoria of private equity, leveraged buyouts, and massive mergers and acquisitions which drove the capital markets into 2007 has disappeared. The bubble in the U.S and U.K housing markets, consumer spending, and easy access to credit fueled the subprime crisis, which brought about catastrophic contractions in liquidity and financing in the debt markets starting in the summer of 2007.

The result in the markets was a massive shift away from mortgage-backed and asset-backed securities and their derivatives. Those individuals and institutions left holding subprime securities had a new name for them: “toxic waste.” The mortgage market downturn in the United States and increasing default rates led to the credit crunch, which in turn led to other consequences, particularly for prime brokers and hedge funds.

In early 2008, Bear Stearns was a leading prime broker. In attempting to catch a falling knife, Bear Stearns’s hedge funds tried to call the bottom of the market. Bear Stearns was hit broadside by the subprime blow-ups of its proprietary hedge

⁵ For an interesting prediction of the fall of the equity markets and the U.S. real estate market meltdown, see Farber, 2005.

funds and other mortgage-backed securities. Their distress caused many financial firms to reduce or eliminate counterparty risks. Prime broker clients removed significant assets from Bear Stearns, fearing that bankruptcy would impact their collateral assets. The impact of the toxic assets on its balance sheet, and a declining prime broker business, made the discount acquisition by JPMorgan Chase, with the support and financing of the U.S. federal government, the only reasonable option other than bankruptcy.

On May 30, 2008, Bear Stearns was acquired by JPMorgan Chase.⁶ Bear's toxic assets were subsumed into JPMorgan Chase's balance sheet with assistance and guarantees from the federal government.⁷ The Bear Stearns prime broker business continued on under JPMorgan Chase, and hedge funds soon returned their business. The prime finance market continued with business as usual until September 2008.

On September 7, 2008, two of the most significant financial events in modern history occurred. The public did not seem to focus on Fannie Mae and Freddie Mac possibly because of their status as semigovernmental organizations. Their distress and conservatorship did not immediately signal the crisis that was to follow. However, for the balance sheet of the U.S. federal government, whether one cuts a check (decreases assets) or assumes the liabilities of an organization (increase liabilities), the financial impact is the same. The sudden conservatorship of Fannie Mae and Freddie Mac were truly colossal financial and political events. With combined liabilities of approximately 6 trillion dollars, the financial risks of these entities were shifted to the U.S. federal government. The federal government's action prevented a total collapse of the housing, mortgage and debt markets, but their efforts would not prevent collateral damage

⁶ JPMorgan Chase Bank (formerly known as Chase Mankattan Bank) et al. v. Springwell Navigation Corp., 2008.

⁷ For the G-20 government considerations for removing toxic assets from banks' balance sheets, see Perkins, 2009.

to investment banks, financial firms, capital markets, and the OTC derivatives market.

Lehman Brothers

Lehman Brothers was considered by many to be the most vulnerable of the major bulge bracket investment banks. The concern for the future of the bank was public and widely discussed in the media given its public failures to raise capital or find a suitable partner.⁸ Yet many observers remained optimistic to the end that Lehman Brothers would find a partner. There was no white knight to save the struggling investment bank, however, as there had been for Bear Stearns and would be for Merrill Lynch.

At close of business on September 12, 2008, Lehman Brothers Holding Inc. (LEH) ended trading at \$3.65. On that day, Lehman Brothers international operations took extraordinary steps to rehypothecate customer collateral assets and utilized them for financing with a series of stock loan and repo transactions. This is not surprising as the investment bank was struggling for financing. Lehman Brothers did not receive a bailout from the federal government. At the end of the day, the international prime broker, Lehman Brothers (International) Europe, transferred approximately \$8 billion from London to the parent holding corporation in New York. The cash swept out of the United Kingdom and other international locations was not returned. Hedge funds assets and other clients had their assets rehypothecated, liquidated, and the cash sent out of the jurisdiction. This was reportedly a normal sweep of cash and securities back to New York in extraordinary times. However, it effectively wiped out the international investment bank and its international clients, some of which were banks, financial firms, and hedge funds.

The Lehman Brothers parent holding corporation had the power to decide which of its hundreds of discrete subsidiaries

⁸ <http://www.smartmoney.com/investing/economy/september-12-2008-friday-will-lehman-find-a-buyer-how-harvard-s-endowment-did/>.

would receive financing. On Monday morning Lehman Brothers Holding Inc. (LEH) started trading at \$0.26, down approximately 93 percent. Some Lehman Brothers entities would receive financing to continue active operations at least for a limited period, while other entities were forced into bankruptcy immediately. The return of the collateral assets remains the source of contentious litigation as the clients and creditors to the international investment bank were effectively left with unsecured claims against a bankrupt firm with minimal assets and extensive liabilities. The battle to return collateral has been further fueled by the rather awkward disclosure that the discount acquisition by Barclays Capital of Lehman Brother's U.S. brokerage operations resulted in a reported windfall profit of \$3.47 billion.⁹

The long, slow path of Lehman Brothers to bankruptcy pointed out the frailty of unfavored independent broker-dealers and the effects of imposing market discipline over systemic risks. It also exposed the vulnerability of the independent investment banks which were not deemed to pose systemic risk. Not since the junk bond kings, Drexel Burnham Lambert had a major broker-dealer become bankrupt. The Lehman Brothers bankruptcy appeared to be justified in order to restore market discipline leading up to the event and even at the time of the initial bankruptcy filing on September 15, 2008. The potential for systemic failure and contagion was not immediately clear.

Further, the experience of Bear Stearns may have made investors, financial firms, and hedge funds complacent that a government bailout or eleventh hour acquisition was forthcoming. A variety of investors had started negotiations with Lehman Brothers, but for one reason or another, had passed on direct assumption of the business. In light of the massive liabilities to the derivatives and debt markets, potential suitors preferred to scavenge the remaining assets (including many skilled Lehman Brothers' employees) rather than acquiring a

⁹ Scinta & Sandler, 2009.

distressed business poisoned with toxic assets and a troubled business model.¹⁰

Lehman Brothers' market capitalization and businesses dropped rapidly prior to its bankruptcy. Ultimately, Lehman Brothers revealed how interconnected the banks, financial institutions, and hedge funds had become. The Lehman Brothers bankruptcy had a catastrophic effect on prime broker clients, stock lending funds, and money market funds which provided liquidity to the markets and were significant holders of ultrasecure short-term U.S. government debt. Lehman Brothers' bankruptcy created broad trading and massive derivative exposures for many of its counterparties. Similarly, credit default swaps on Lehman Brothers created huge gains for some hedge funds and created corresponding liabilities for less fortunate counterparties, such as AIG.

After Lehman Brothers' collapse, brokers and banks stopped trusting each other. Hedge funds stopped trusting the investment banks and their prime brokers. No hedge fund, prime broker, or investment bank wanted exposure to any other party. Hedge funds reduced their leverage significantly, and the deleveraging cycle of the investment banks and other firms continued. Investment banks reduced lending and the leverage available to clients, and banks ceased lending and borrowing from each other.¹¹ Normal financing transactions ground to a halt after September 16, 2008.

The Run on Money Market Funds

When the damage was revealed the markets panicked. There was a flight to safety. Investors sought only the safest investments; traditionally short-term U.S. government debt was such a safe

¹⁰ For a review of the lead-up to Lehman's bankruptcy see Sender, Guerrero, Larsen, & Silverman, 2008. Also, many parts of Lehman were subsequently parceled out to a variety of investors, including a variety of asset management arms; Reuters, 2008 and Grene, 2008.

¹¹ The record spreads of LIBOR-OIS demonstrated the breadth of the problem in the financing markets post-Lehman.

haven. Money market mutual funds are huge purchasers of U.S. short-term debt, and on September 16, 2008, the Reserve Primary Fund, the oldest money market mutual fund, reported substantial exposures to Lehman Brothers. These exposures to Lehman Brothers reduced the money market mutual fund's net asset value (NAV) to approximately \$0.97. By dipping below a NAV of \$1.00, the Reserve Primary Fund had "broken the buck." Although this is only a small loss, it is an extremely rare occurrence, and it had a massive impact on already nervous and falling markets. If the most liquid and safe investments could lose money, then was any investment safe? Other money market mutual funds soon came under similar pressure from investor redemptions. The run on money market mutual funds and securities lending funds had begun and involved some of the most systemically important firms, including the Bank of New York Mellon.¹² U.S. money market funds were redeemed at a record pace. The run on money market mutual funds contracted liquidity and threatened to cause the liquidation of other funds such as the Putnam Investments Prime Money Market Fund.¹³

The money market funds are important sources of liquidity for the international markets and especially for broker-dealers. The run on money market mutual funds resulted in massive contractions in liquidity as redemptions threatened to swallow up available cash reserves. Updates and assurances from money market mutual funds attempted to allay concerns, including statements of exposures to various notable market counterparties, such as AIG, Morgan Stanley, Goldman Sachs, and Washington Mutual.¹⁴ Notwithstanding these assurances, institutional investors continued redemptions as the shocking revelation that U.S. money market mutual fund investments were potentially worth less than

¹² The Bank of New York Mellon's security lending fund also "broke the buck" due to exposures to Lehman Brothers.

¹³ The Putnam Investments Prime Money Market Fund held over \$15 billion, and other leading money market mutual funds cumulatively held assets in excess of \$600 Billion.

¹⁴ See Management, 2008.

holding cash set in.¹⁵ The money market mutual funds reported that initial waves of redemptions came from institutional investors. Due to the mechanics of their redemption waiting periods, redemptions from retail investors had not even been processed but loomed in the following week.

In response, the U.S. Department of Treasury announced an emergency program to insure the holdings of any eligible money market fund to guarantee that if the fund dropped below a NAV of \$1.00, it would be restored to \$1.00.¹⁶ The run on the money market mutual funds was stemmed by the insurance program, as the Treasury guarantee of the money market funds was effectively a guarantee that the fund would always be as good as holding cash. Thus institutional and retail investors ceased redeeming money market investments. This was a particularly important step for the U.S. government as the liquidation of the U.S. money market funds would have dumped significant amounts of U.S. short-term debt on the international market. The run had the potential to cause a total collapse of the U.S. debt market and may have resulted in a run on treasuries and ultimately the U.S. dollar if the money market funds were liquidated and contagion spread. This in turn would have posed systemic risk by preventing the government from financing multitrillion-dollar bailouts and stimulus packages, potentially leading to the collapse of the international reserve currency.

A run of a different kind occurred with prime brokers. The remaining two elite prime brokers—Morgan Stanley and Goldman Sachs—had massive collateral holdings in their prime finance businesses. Their clients, the hedge funds and other investment funds, reduced leverage, sold out of their positions, and withdrew collateral at alarming rates. This was an indirect run on the prime brokers, who were forced to return cash and collateral that had previously been used for financing them. The run on

¹⁵ The money market investment managers continued to assure investors with updates, including Federated Money Market Fund (Federated, 2008), UBS (Management, 2008), and other major funds.

¹⁶ The insurance program was supported by the Exchange Stabilization Fund.

the free-standing investment banks saw clients move assets to perceived safe havens, including custodians and universal banks. The universal banks that benefited were able to offer security, transparency, and the potential for support from governments in the United States and internationally.

Many U.S. financial firms had reportedly been targeted by short sellers. In some cases, the significant drop in the value of financial firms was attributed to abusive short sales, while in other cases it was merely investors liquidating long positions, and falling equities markets globally. On September 19, 2008, the SEC issued the first short-selling ban for an expanding list of U.S. securities firms, banks, and other financial institutions. The various regulators around the world followed suit in a haphazard cascade of similar, but distinct, short-selling restrictions. The short-selling ban was designed to limit the pernicious acts of abusive short sellers who were pounding falling financial stocks with additional short positions, and even naked short sales. The result was a spiraling decrease in the value of the bank and financial stocks around the globe. The short sellers were not stopped from creating short positions, which had a variety of other structures, derivatives, and financial instruments to achieve their investment goals. However, the short-selling restrictions did impact the financing of the broker-dealers. Broker-dealers were unable to utilize stock loan and repo transactions to finance operations on the stocks, and this further limited the available financing at just the time when they could afford it least. The result of a run on the prime brokers by clients removing collateral and their inability to finance with remaining stocks deprived the independent investment banks of necessary sources of financing.

There was pervasive confusion and fear throughout the international financial system and markets in September 2008. Of particular concern to hedge funds were the solvency, security, and transparency of Goldman Sachs and Morgan Stanley. One week after the largest bankruptcy in U.S. history, Lehman Brothers' \$683 billion in assets, both Goldman Sachs and Morgan Stanley

were registered as bank holding companies. Why was the transformation to deposit-taking financial institutions necessary? The structural changes were required in part for financing. It was necessary as hedge funds, investment banks, and other counterparties stopped lending and borrowing from these independent investment banks. The hedge funds continued to withdraw their collateral assets as they had with Lehman Brothers and Bear Stearns, and institutional counterparties restricted or eliminated exposures. A combination of concerns captured investors, and forced hedge funds into a prisoner's dilemma. The fear of a deep-freeze of collateral assets similar to what happened at Lehman Brothers, hedge fund manager's concerns about fiduciary duties to their investors, and ongoing efforts to mitigate and diversify risks against prime brokers all led to removal of collateral assets and a run on the prime brokers. The removal of collateral assets is critical for prime brokers as fees, expenses, and financing are derived from these collateral assets. The other banks, hedge funds, corporations, and institutions stopped lending and borrowing as liquidity evaporated and counterparty default concerns became pervasive and paramount. Deleveraging of the banks and prime brokers and the removal of hedge funds' collateral assets increased in this tumultuous period.¹⁷ After the dust settled, we have some insight as to where the hedge fund assets, cash and securities, were transferred. Notable beneficiaries of the change in the prime finance market were large universal banks, and significant amounts of the business transferred to the perceived safety of European banks with U.S. affiliates.¹⁸

In the extreme liquidity crisis after Lehman Brothers' bankruptcy, the financing model of the independent U.S. investment banks failed. The only remaining lender was the lender of last resort, the Federal Reserve. However, only banks with secured financing such as triparty repo agreements may have

¹⁷ Avery, 2008.

¹⁸ Reportedly, some beneficiaries include Credit Suisse, Deutsche Bank, BNP Paribas, and JPMorgan Chase, which is now the largest prime broker.

access to the Federal Reserve window. On September 21, 2008, the elite prime brokers, Goldman Sachs and Morgan Stanley, were transformed into bank holding companies, a previously unthinkable option. This last registration, while apparently minor, was a significant event in that it changed the investment bank's regulatory regime and allowed for direct financing by the Federal Reserve.

The important lesson Lehman Brothers revealed was that independent investment banks were highly leveraged and vulnerable to liquidity shocks. Hedge funds were exposed to significant counterparty risk to their prime broker, particularly in the international sphere where domestic protections were absent. Hedge funds liquidated positions, reduced leverage, and withdrew collateral and funds from the remaining independent investment banks.¹⁹ The concern for clients' collateral spiraled into a category five securities run. By the end of October 2008, all the free-standing investment banks were extinct and hedge funds were sitting on record amounts of cash.

The Lehman Brothers bankruptcy was a catalyst for the financial crisis in the fall of 2008. The crisis precipitated catastrophic effects for prime brokers, investment banks, financial institutions, and the international equity and credit markets. Other victims of the financial carnage included MBIA, Wachovia, and Washington Mutual, and many smaller banks. There were just as many near misses as well. Many other firms and banks were financed only by the grace of the Federal Reserve, FDIC, and U.S. federal government initiatives such as the Troubled Asset Relief Program (TARP). These firms include AIG, Chrysler, General Motors, GMAC, American Express, and many others.²⁰ The other aspects of the bailout were financed by raising more debt. Thus without stemming the run on major money market

¹⁹ The withdrawals from Morgan Stanley and Goldman Sachs were significant in 2008; see Terzo, 2008b.

²⁰ For an interesting review of the markets and accidents along the way, see Lewis & Einhorn, 2009.

funds and other systemically important banks and firms, the entire U.S. financial system would have been placed in jeopardy.

Broker-dealers, investment banks, and universal banks were challenged in 2008. Many hedge funds were totally annihilated in the crisis. The breadth and number of hedge funds that became distressed, redeemed, voluntarily closed, or blew up was unprecedented. There were legal, operational, and investment pitfalls. Some funds made catastrophic investment decisions to remain highly levered in volatile markets. Others managed to navigate the storm in the markets, to avoid failures of prime brokers, and rejected investments in toxic assets were still redeemed by nervous investors. Institutional investors pulled more and more capital from the alternative investment asset class in both struggling and successful funds. The fear of complete global meltdown, coupled with frauds and failing trust, became pervasive in the financial industry. It did not help that, on average, the hedge fund industry lost capital. While there were notable exceptions of superior management and exceptional returns, the poor industry average performance and egregious cases of fraud led to record redemptions. The myth that hedge funds perform well in both bull and bear markets was dispelled. However, it is important to note that hedge funds did not precipitate, nor were they central to, the crisis.

Many institutional investors redeemed hedge fund investments across the board. Nowhere were the strains or implications of unprecedented markets felt more than in the area of prime finance. Although it is not a cause of the crisis, prime finance is the intersection of investment banks and hedge funds, and their investors. Prime finance is the axis point of many important actors on the world financial stage. Prime brokers are primarily responsible for leverage and may provide liquidity to the individual investors, hedge funds, and markets. The complexity of the relationship should reveal that the prime brokerage model is largely a safe and preferable form of secured financing. In fact, the prime finance model is designed to protect prime brokers and the larger financial industry from failing hedge funds. Although the hedge funds borrow from prime brokers, they also provide

important sources of financing for them in the form of cash and collateral securities posted with the prime broker. The interrelationship and complexities of the services provided are among the most complicated in international finance.

The effects of a prime broker failure require a detailed examination of the fallout from Lehman Brothers. The Lehman Brothers bankruptcy was an international failure. It revealed the complexity of the prime finance market and the need for clarity, transparency, and security over assets held with prime brokers. Major hedge funds with billions in assets were caught wrong-footed and had their assets frozen with Lehman Brothers in the United States and internationally.

An International Crisis

The Lehman Brothers bankruptcy was an international failure that continues today. The parent holding company, Lehman Brother Holdings Inc. (LBHI), took only days to fail, but the cascade of effects will take years to come to completion.²¹ Lehman Brothers Inc. (LBI) was a subsidiary of LBHI. LBI was the primary trading vehicle in the United States and stood as one of the largest broker-dealers in the world. The European broker-dealer, Lehman Brothers (International) Europe (LBIE) was brought down early while the U.S. prime finance operations continued for a number of days. LBIE is a U.K. limited liability company largely responsible for trading and financing activities in Europe and internationally.

When LBHI declared bankruptcy in the United States on September 15, 2008, under Chapter 11 of the U.S. Bankruptcy Code, a huge range of other subsidiaries and Lehman Brothers' vehicles were drawn into the bankruptcy.²² The many other vehicles relied upon the parent holding company for daily financing. LBIE relied on LBHI for funding. LBHI had regular

²¹ See MacIntosh, 2008.

²² See *In re Lehman Brothers Holdings Inc., et al., Debtors*, 2008, and *In re Lehman Brothers Holding Inc., Debtors*, 2008.

sweeps of cash to and from the parent company in the United States. The collapse into bankruptcy of LBHI had the effect that all the other Lehman entities that relied upon LBHI for funding were forced into insolvency with it.

Many of the more than one thousand hedge funds which held collateral assets within Lehman Brothers were prime broker clients. The effect of the bankruptcy has been catastrophic for many funds which have been forced to liquidate remaining assets and terminate operations.²³ Some funds tried lobbying governments and exigent litigation to free their collateral assets from the bankruptcy.²⁴ It was estimated that approximately \$40 to \$65 billion in collateral assets were frozen and may be unrecoverable in the LBIE bankruptcy.²⁵

Many of these hedge funds had relationships with both LBI, the U.S. broker-dealer, and LBIE, the non-U.S. international broker-dealer. There were prime broker and margin lending agreements in place with many of these funds. In some cases, under the prime broker agreements, LBI maintained the Prime Broker Account and LBIE maintained the Margin Lending Account. LBI in turn transferred the collateral securities to LBIE, which was authorized to make loans and provide other ancillary services. The collateral assets posted with LBIE served as collateral to secure any obligations from lending or the provision of services. Like other prime brokers, the Margin Lending Agreement provided that LBIE was authorized to lend the securities to itself or others, to pledge, repledge, hypothecate, and rehypothecate the collateral assets. The power to do so was largely unrestricted except as contractually agreed. However, LBIE was required to

²³ Mackintosh, 2008; Larsen, 2008; Gangahar, 2008.

²⁴ Reuters, 2008; Giles & Mackintosh, 2008; and Hughes, Mackintosh, & Murphy, 2008.

²⁵ The delay is accessing an estimated \$65 billion in collateral assets that were "calling into question the future of the UK prime broker market" in a letter to Mervyn King, the Governor of the Bank of England (Giles & Mackintosh, 2008, p. 15). However, others estimated the prime broker collateral assets at approximately \$40 billion (Hughes, 2008).

pass through any payments, distributions, or dividends paid on the collateral assets.

The administrators of LBIE in the United Kingdom were faced with the overwhelming task of overseeing the bankruptcy administration of a multibillion-dollar international trading company, making Lehman Brothers the largest and most complex bankruptcy in history.²⁶ When the U.K. administrator in bankruptcy applied for directions on amounts held on trust or any proprietary claims to the bankruptcy court, the bankruptcy court ordered the trust and proprietary amounts held to be identified and separated from the property of the bankrupt. However, this was a more difficult task than originally anticipated.

When the U.S. and U.K. bankruptcies occurred, many were surprised by the complexity and differences in the two regimes. One of the challenges was to manage expectations of the creditors in fundamentally different systems. In the U.S. bankruptcy regime, there is a generally accepted predisposition to allow reorganization of a business as a “going concern.” Lawyers lead efforts to restructure the business in the United States. In the United Kingdom, the administration is dealt with by accountants and the majority of bankruptcies result in liquidation.

Hedge funds were facing devastating markets and broad redemptions. There were delays and confusion resulting from the Lehman Brothers collapse. Four investment funds sought the assistance of the bankruptcy administrator in the United Kingdom and asked the bankruptcy court to return their collateral. The bankruptcy effectively froze the positions of the hedge funds indefinitely. Several hedge funds with assets located at Lehman Brothers attempted to compel the bankruptcy administrator to return collateral assets on an expedited schedule while their identities remained strictly confidential.²⁷ It was feared that if their

²⁶ Hughes, 2008.

²⁷ RAB’s attempt to have \$50 million in collateral assets returned, in *RAB Capital, PLC v. Lehman Brothers International (Europe)*, 2008, and also the confidential efforts of certain funds’ failed effort to return collateral, in *Four Private Investment Funds v. Lomas et al.*, 2008.

identities were revealed, investors would immediately redeem their investments and hedge funds business would be finished. The initial expedited efforts to return assets were unsuccessful. The administrator pointed out that LBIE had more than one thousand prime brokerage clients that had assets frozen in the bankruptcy administration. The hedge funds that attempted to have the assets returned on a priority basis were rejected. They stood in a similar position to other creditors, and their collateral securities had been utilized by Lehman Brothers prior to the bankruptcy.

The difficulty for the administrator of the bankruptcy is that all the prime broker clients, hedge funds, and others stand in a similar position. The bankruptcy judge reiterated the detailed due diligence on Lehman Brothers' books:

[The administrators] say that in order to determine whether to accede to a client request for the re-delivery of securities and monies provided by way of collateral, they must carry out a variety of tasks:

(1) Investigate and obtain definitive information on closing, reversing, unwinding or otherwise dealing with any unsettled trades which may affect the client's account, (2) ascertain the client's holding of securities and monies in accordance with the LBIE database once it has been fully updated, (3) conduct a reconciliation of LBIE data and records held by LBIE's custodians and resolve any difference or disparities, (4) establish whether and how securities may have been reused, (5) establish whether and how monies provided by way of collateral are held, (6) determine the extent of any indebtedness of the client to LBIE and any other Lehman Group entity and whether there are other reasons for the exercise of LBIE's lien over the securities, and (7) establish whether other clients had interests in the stocklines of the securities held in each custodian account in case there should be a competing claim to the securities in the event of a shortfall.²⁸

²⁸ Four Private Investment Funds v. Lomas et al., 2008, para 19, p. 9.

This detailed analysis is required to ensure that competing claims are recognized and that creditors are dealt with fairly and equally. One problem with immediately returning securities is that the LBIE books were a moving target, with assets and liabilities constantly changing. For example, there were more than 140,000 failed trades as a result of the bankruptcy, which resulted in additional claims for and against LBIE.

Also, the actions of LBIE prior to the bankruptcy effectively moved all assets, rehypothecating and lending out securities and utilizing them for financing transactions. The resulting cash from financing securities was transferred to the U.S. parent company at the end of September 12, 2008, leaving nominal assets in LBIE. The problem for the prime brokerage clients was in the location of securities and details of related transactions. The bankruptcy judge outlined the problem for applicants in seeking to have their assets returned immediately.

[The Administrators] state that, like many other LBIE prime brokerage clients, the applicants held long and short market positions, had borrowed securities to cover short positions and had long assets which were re-hypothecated. They explain that, under the contractual arrangements entered into with the applicants, LBIE was entitled to use the applicant's assets as collateral for loans to its clients, to lend securities to cover the settlement of short sale transactions, to pledge securities to market counterparties in order to collateralize obligations and to lend the securities to other market counterparties. They state that from the data available it would appear that as of 12 September 2008, being the last available date at which information from the LBIE database is available, LBIE had extensively exercised its right to re-use collateral securities that the applicants had provided and that, from enquiries made, some of those securities may have been transferred to LBI with whom the applicants had their main prime broking relationship and that other securities may have been provided to other third parties as collateral for other transactions. They also explain that LBIE holds, in segregated client accounts with third party custodians, securities which have been provided

to it by way of collateral and that the client account in question is simply a pooled fund of assets which may belong to a number of different clients. They explain that it is segregated only in that it contains assets beneficially owned by clients rather than LBIE itself.²⁹

The collateral assets which were extensively reused as collateral for other financing transactions were now the property of the counterparty. The bankruptcy of Lehman Brothers was an event of default. The event of default crystallized financing and made the collateral the property of the other party which could not be claimed back. With a significant amount of collateral being extensively utilized immediately prior to bankruptcy, the terms and good faith of the transactions will be questioned in future litigation, but these actions moved collateral assets with LBIE to other counterparties, including LBI. Finally, there were difficulties in how the collateral assets were held with Lehman Brothers. Efforts to segregate client accounts that end up in pooled client accounts are of limited value.

[The administrators] are not able to say with certainty whether securities can be returned in full to any given client or whether a shortfall exists which must be shared pro rata across all client holdings. . . . They explain that until the reconciliation of each stockline or each custodian-held client account is carried out, a process which they say will take a long time, it will not be possible for [the administrators] to return assets to clients.³⁰

The collateral assets were held with third-party custodians. Client assets were segregated from proprietary firm assets. However, client assets were allegedly lumped together in a pool of clients' assets or pooled client accounts. The value of a segregated account is diminished and undermined if the client assets are not clearly separated and distinguishable from other client

²⁹ Four Private Investment Funds v. Lomas et al., 2008, para. 20, p. 9.

³⁰ Four Private Investment Funds v. Lomas et al., 2008, para. 23, p. 10.

assets. The segregated client accounts may ultimately prove to have sufficient assets; however, it is possible that due to the extensive rehypothecation and utilization of client assets, along with transfers to the other Lehman Brothers entities, recovery will not be possible.

There is also a jurisdictional challenge for the clients who hold accounts from both LBIE and LBHI. The jurisdiction of the collateral holding may fall to either the English regime (which dictates that PRIMA prevails) or the American regime in which the explicit agreement in the Account Agreement governs the assets, subject to U.S. law and the dictates of The Hague Securities Convention.

The Lehman Brothers bankruptcy has led to massive changes in the prime broker market and counterparty risk assessments. Lehman Brothers' default stands as an important example of the challenges in addressing multinational issues in prime brokers in the future.

Lehman Brothers also changed the way the parties to prime finance assess risks. Traditionally, prime brokers have been concerned about hedge funds blowing up, not the other way around. From LTCM's blow-up in 1998, to Bear Stearns' distress in the spring of 2008, systemically important firms were not allowed to fail. A major bulge bracket investment bank has long been considered "too big to fail." The failure of Lehman Brothers and its prime brokerage business led to a paradigm shift.

The unthinkable scenario of a leading prime broker failure quickly became a stunning reality on September 15, 2008. Suddenly, hedge funds that ignored the lessons of failures like Refco and Bear Stearns were finally forced to ask primary questions about prime brokers and to differentiate between the creditworthiness of prime broker counterparties, that is, between independent prime brokers and universal banks. What is the probability of the credit default of the prime broker? What transparency is there into the prime broker entity? What is the governing regulatory regime? And how are the various assets held by a prime broker differentiated, segregated, and accounted for? Prior to Lehman

Brothers, all prime broker counterparties were thought of as the same. Suddenly, it was critical to differentiate between prime brokers and establish clear and unambiguous answers for worst case scenarios.

Lehman Brothers, in both the United States and internationally, showed the importance of understanding the vulnerability of the prime broker counterparty. A great deal of the credit exposures for hedge funds were related to international transactions and financing arrangements. LBIE was the actual international counterparty in many cases. LBIE was a severely subordinated vehicle. LBIE was responsible for a great deal of the leverage supplied to the hedge funds. The actions of LBIE prior to the bankruptcy to rehypothecate assets, utilize them for financing, and transfer remaining cash and securities to the U.S. parent corporation effectively liquidated client assets. It was critical to establish with detailed specificity which regulatory regime would apply to the variety of assets held by the prime broker, including client's cash, fully paid securities, encumbered securities, and rehypothecated securities.

Understanding Prime Finance

In the public press there has been great interest in finding the culprits, vilifying the wrongdoers. Who betrayed us? Who stole our money? In isolated cases the answer is that fraudulent fund managers were to blame.³¹ But in the majority of the cases, there is no one to fault. There was a combination of compounding errors in assessing and understanding risk (epistemology), errors in understanding the nature of the financial products and investment vehicles (ontology), and grave lapses where self-interest and inappropriate incentives lead to excessive risk taking for princely rewards (ethics). These international institutions were highly levered with risky assets, and the models employed to assess risk

³¹ A notorious example is the Ponzi scheme allegedly perpetrated by Bernard Madoff.

were inaccurate and sometimes flawed. The combination of high leverage, unprecedented illiquidity, toxic assets, and unpredictable low frequency, high severity events was a lethal combination of factors. The result was a broad based, international loss of capital. The international system has been structured to employ offshore unregulated vehicles, and these same vehicles are important sources of capital for the leading banks. The following chapters will examine hedge fund and prime finance markets, the parties to prime finance, and their transactions, risks, and regulations. Finally, we shall look to the future of hedge funds, executing brokers and prime brokers.

When attempting to understand and prevent a recurrence of the global financial crisis, the first step is to ask primary questions to understand the nature of the organizations and transactions that stand at the intersection of investment vehicles, leverage, financing, and financial products. The area of prime finance and hedge funds is among the most complicated areas of international law and finance. It is critical to know the parties involved in order to understand and address systemic risk, avoid market abuses, and protect both individual and institutional investors, sometimes even from themselves. Once the basics are reviewed, then the more significant task of regulating and potentially reforming the vehicles of international finance will be addressed. The first step to understanding hedge funds and prime finance is to understand the primary customer, hedge funds, and to examine their anatomy, structures, objectives, and strategies.

