

CHAPTER 7

The Next Lehman Bankruptcy

Emily Kapur

Introduction

On Monday, September 15, 2008, Lehman Brothers filed for Chapter 11 bankruptcy and, according to some, “triggered a global financial crisis.”¹ On Tuesday, the money market fund Reserve Primary deemed its claims on the Lehman Estate to be worthless and revalued its shares below \$1.² Within a week, investors withdrew hundreds of billions from money-market funds, most funds in turn curtailed short-term lending, and ordinary corporations that relied on such funding found themselves at risk of failing to meet payroll or restock inventories. Some feared the consumer payment system would freeze.³ As Federal Reserve Chairman Ben Bernanke later observed, “Of maybe the 13 . . . most important financial institutions in the United States, [all but

Many thanks are due to Tanya Beder, Timothy Bresnahan, John Cornish, Darrell Duffie, Wilson Ervin, Joseph Grundfest, Richard Herring, Thomas Huertas, Paul Kapur, Michael Klausner, William Kroener III, Thomas Jackson, Michael McConnell, Mitchell Polinsky, Steven Ray, David Skeel, Kenneth Scott, Kimberly Summe, John Taylor, and Phillip Warren, as well as participants in the Stanford University Economics PhD Seminar and the Stanford Law School Law and Economics Seminar, all of whom generously spent time with me discussing the issues in this article and offering comments on this and earlier drafts and presentations. All errors are my responsibility.

1. Joseph Checkler and Patrick Fitzgerald, “Lehman to Dole Out Additional \$17.9 Billion to Creditors,” *Wall Street Journal*, March 27, 2014.

2. Christopher Condon, “Reserve Primary Money Fund Falls Below \$1 a Share,” *Bloomberg*, September 16, 2008, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a5O2y1go1GRU>.

3. FCIC (Financial Crisis Inquiry Commission), “The Financial Crisis Inquiry Report,” 2011, 357–59.

J. P. Morgan] were at risk of failure within a period of a week or two.”⁴ Meanwhile, depositors began to withdraw deposits from “very, very strong banks,” a classic measure of financial panic.⁵

Government interventions eventually halted these cascading runs. But the real economy fell “into an abyss from which it has not yet fully emerged.”⁶ One study estimates the crisis has cost the United States between \$6 trillion and \$14 trillion, or up to \$120,000 per household.⁷

Scholars debate Lehman’s exact responsibility for the crisis, but agree that its bankruptcy imposed immense systemic costs on the economy.⁸ Unfortunately, even with much improved financial regulation, the failure of large financial institutions will continue to be a perennial problem. As I describe in part I, financial institutions and their short-term creditors are constantly at risk of falling into a prisoner’s-dilemma dynamic that causes creditors to run and financial institutions to fail. These runs can easily spread and become extremely costly. The classic solution to runs on commercial banks has been to insure them, but large non-bank financial institutions like Lehman have never been insured because their creditors are not everyday taxpayers.

As a result, in 2008, there were two available alternatives for a failing firm like Lehman: file for Chapter 11 bankruptcy or be bailed out by the government.⁹ Each option was problematic. As Lehman

4. *Ibid.*, 354.

5. *Ibid.*, 353–54 (quoting then treasury secretary Timothy Geithner).

6. Eduardo Porter, “Recession’s True Cost Is Still Being Tallied,” *New York Times*, January 21, 2014.

7. Tyler Atkinson, David Luttrell, and Harvey Rosenblum, “How Bad Was It?” Federal Reserve Bank of Dallas Staff Papers, no. 20, July 2013, 1.

8. Compare, e.g., Gary Becker, “Capitalism’s Return from the Financial Crisis,” *Becker Posner Blog*, September 16, 2013, <http://www.becker-posner-blog.com/2013/09/capitalism-return-from-the-financial-crisis-becker.html>, with John B. Taylor, “The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong” (unpublished manuscript), November 2008: 15-18, <http://www.stanford.edu/~johntayl/FCPR.pdf>.

9. I define a bailout as a grant of public funds allowing creditors to receive more than they would in a liquid marketplace. See also Randall D. Guynn, “Are Bailouts Inevitable?” *Yale Journal on Regulation* 29 (2012): 125n17 (discussing bailout definitions).

illustrated, Chapter 11 bankruptcy risked contributing to a financial crisis because it failed to prevent runs. In Chapter 11, claimants' treatment depends upon their seniority in the debt structure, a ranking orthogonal to debt maturity. Unsecured short-term lenders therefore have strong incentives to run—by either recalling or refusing to renew debt obligations—before Chapter 11 begins. As we observed with Lehman, once the prospect of Chapter 11 bankruptcy became real, runs swept through the financial system, impacting institutions far removed from Lehman itself.¹⁰ Bailouts, by contrast, help mitigate these immediate risks, but also generate long-term inefficiencies. In a typical bailout, shareholders sustain losses, but creditors are indemnified. This reduces creditors' incentives to run in the short term but, over the long term, it encourages them to offer financial institutions less expensive loans, which in turn encourages those institutions to structure themselves in a manner more prone to runs and therefore to failure. The costs of increasing the frequency of crises by making financial institutions more failure-prone could dwarf those of the 2008 financial crisis.

Three new recapitalization mechanisms—Chapter 14, the Federal Deposit Insurance Corporation's single-point-of-entry (SPOE) under Title II of the Dodd-Frank Act, and the European Union's Bank Recovery and Resolution Directive (BRRD)—all seek to address the problems of both Chapter 11 bankruptcy and bailouts in similar ways. The straightforward economic logic behind these proposals is that

10. There are of course many theories of how the financial crisis occurred, only some of which argue that Lehman's failure had any causal effect. For instance, one theory is that the crisis was caused by a common reassessment of the value of assets and that Lehman (and AIG) merely helped reveal that assets were mispriced. See, e.g., Kenneth Scott, "A Guide to the Resolution of Failed Financial Institutions," in *Bankruptcy Not Bailout: A Special Chapter 14*, ed. Kenneth E. Scott and John B. Taylor (Stanford, CA: Hoover Institution Press, 2012), 85–132. In all likelihood, many factors contributed. I mean only to ascribe some weight to the theory that Lehman's bankruptcy contributed in part by convincing markets that short-term lenders might bear losses. I do not mean to argue that Chapter 14—or, for that matter, SPOE—would have relieved the crisis through other channels that caused and perpetuated it.

swiftly recapitalizing an ailing financial institution will force losses onto shareholders and long-term creditors while maintaining operations and therefore forestalling runs. This is a compromise solution. Like bailouts, each of these mechanisms does indemnify short-term lenders. In conjunction with regulations requiring financial institutions to finance themselves with sufficient long-term relative to short-term debt, however, these mechanisms should substantially reduce the severity of bailouts' debt-subsidy problem. The upside of indemnifying short-term lenders is that, as with insurance, the probability of runs is far lower than with Chapter 11. Moreover, similar to insurance, each of these mechanisms also minimizes run risks by reducing uncertainty about the timing of resolution. Because regulators with better access to information about financial institutions' solvency play a substantial role in each mechanism, short-term creditors concerned that an institution may be on the edge of insolvency have less reason to run than in the case of Chapter 11, which gives managers an incentive to file for bankruptcy only after the firm becomes insolvent.

Building upon other chapters of this volume, part I briefly details how Chapter 14 solves both Chapter 11's tendency to induce runs and bailout's tendency to create moral hazard, at least for firms that fail due to insolvency. SPOE and BRRD can also solve these twin problems, though the moral hazard reduction achieved by Chapter 14 is likely to outweigh that of SPOE and the details of BRRD remain too murky for comparison.¹¹

Part I is largely theoretical. It leaves open the question of whether various real-world obstacles will prevent Chapter 14 from working in practice. Would Lehman's case have turned out substantially better had it gone through Chapter 14 rather than Chapter 11?

The rest of the paper seeks to answer this question. Using previously unexplored discovery¹² and court documents available from Lehman's bankruptcy, it undertakes a counterfactual case-study analysis of how

11. See part I in this chapter.

12. All discovery documents referenced in this paper may be found at "Index of/lehman/docs," Jenner and Block, <http://www.jenner.com/lehman/docs/>.

and whether Chapter 14's section 1405 transfer would have worked had it been available in 2008. Part II analyzes Lehman's economic history and finds that perceived insolvency indeed drove Lehman's run. Lehman was therefore the type of case that Chapter 14 is best suited to address. Part III delineates the procedural aspects of a counterfactual Chapter 14 case for Lehman. It shows that, though the time frame to complete a Chapter 14 over-the-weekend asset-and-liability transfer is rushed, Chapter 14 places sufficiently minimal requirements on the courts so as to make this process feasible with the advance planning that the Dodd-Frank Act already requires.

Finally, part IV evaluates the prospects for a hypothetical post-Chapter 14 company called New Lehman. It assesses how new industry initiatives and US and EU laws and regulations would manage cross-border issues and considers the probability of market-provided funding. Part IV concludes that, in the counterfactual world, New Lehman's 19 percent book capital ratio eliminates insolvency-driven incentives to run. And even if lenders and counterparties run for other reasons, New Lehman can withstand a moderate drain on liquidity.

In the end, Chapter 14 improves outcomes for most parties at interest relative to Chapter 11: clients, counterparties, and most creditors face no losses. Unlike in a bailout, long-term lenders do face substantial losses, but still likely fare better than they did in Lehman's Chapter 11 case. As in Chapter 11, shareholders and subordinated debt holders likely receive nothing. Overall, the likelihood of systemic consequences is small and social welfare is much improved relative to Lehman's 2008 Chapter 11 case. Therefore, in Lehman's and in similar cases, Chapter 14 and similar mechanisms offer credible alternatives to bailouts and to Chapter 11. Part V concludes with a summary of findings.

Part I. The Logic of Chapter 14 for Insolvent Financial Firms

This part briefly addresses how Chapter 14 would solve the key problems of financial failure for those firms to which it applies. The Chapter 14 proposal would, among other supporting amendments,

add a new Bankruptcy Code chapter exclusively for financial firms that would operate faster and with greater precision than does Chapter 11.¹³ As detailed in other chapters of this book,¹⁴ Chapter 14 may be used in a variety of ways for different types of financial institutions experiencing different types of failures. This paper analyzes only one application: a section 1405 transfer used for a systemically important financial institution. For brevity, the remainder of this paper uses the phrase “Chapter 14” to mean this particular application of the Chapter 14 provision.

Applied as a transfer, Chapter 14 would facilitate moving all of a parent holding company’s assets and most of its liabilities into and out of bankruptcy over a weekend. Unlike Chapter 11, it would disallow business reorganization over the course of this brief bankruptcy and would leave all operating subsidiaries outside of bankruptcy entirely; instead, it would facilitate, in effect, only the reorganization of the parent company’s balance sheet. Specifically, Chapter 14 would allow for the transfer of all of the parent company’s assets and liabilities *except* long-term and subordinated debt to a new, non-bankrupt bridge financial holding company of which the bankruptcy estate would become sole owner. Long-term and subordinated debt and equity claims would remain with the estate while the new company would assume all good and bad assets as well as short-term debt, derivatives, and other contractual obligations. In addition, Chapter 14 would prevent counterparties and creditors of operating subsidiaries from terminating obligations. At the end of the process, the new company’s balance sheet and contractual relationships would be nearly identical to the old company’s *except* that equity would have taken the place of long-term and subordinated debt and, in this sense, the new company would be recapitalized.¹⁵ In Lehman’s

13. See Thomas H. Jackson, “Building on Bankruptcy: A Revised Chapter 14 Proposal for the Recapitalization, Reorganization, or Liquidation of Large Financial Institutions: Appendix,” chapter 2 in this volume.

14. Kenneth Scott, “The Context for Bankruptcy Resolutions,” chapter 1 in this volume; and Jackson, “Building on Bankruptcy: Revised Chapter 14,” chapter 2 in this volume.

15. See part IV.A in this chapter.

case, this would have increased its book capital ratio from 5 percent to 19 percent.¹⁶

Before addressing the economic logic behind this process, it is important to note that Chapter 14 is only available for a subset of failing firms and therefore this logic applies only to this subset. At least when the Fed is filing the case,¹⁷ to meet Chapter 14's legal standards: (1) the parent company of an ailing financial institution must provide adequate assurance of future performance on assumed contracts after it is recapitalized; and (2) Chapter 14 must be necessary to avoid serious adverse effects on US financial stability.¹⁸ The first adequate-assurance standard largely excludes from Fed-initiated Chapter 14 both (i) failing firms that are already experiencing a severe run on liquidity; and (ii) firms that will remain insolvent even after converting all available long-term and subordinated debt into equity.¹⁹ The second adverse-effects standard excludes firms for which a private-sector solution appears imminent or for which a Chapter 11 case would avoid systemic consequences. By comparison, the single-point-of-entry approach has a similar adverse-effects standard but lacks an adequate-assurance standard and could therefore be used

16. See discussion in part III.D of this chapter.

17. For firms in circumstances such as Lehman's, it makes sense to focus on this use of Chapter 14. As discussed in part III.A in this chapter, unlike Chapters 7 and 11, either the firm or the Fed can initiate Chapter 14. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(4). A possibility of recovery will often remain even after Chapter 14 is warranted, however, leaving management and directors disinclined to file because their incentives are aligned with those of equity holders rather than creditors and, more generally, with the company rather than systemic welfare.

18. Jackson, "Building on Bankruptcy: Revised Chapter 14," sections 2(4), 2(13).

19. See also discussion in part III.B in this chapter. In some cases, firms in category (i) may use Chapter 14 if they can show that they will be able to secure new financing immediately following Chapter 14. Until markets are familiar with the Chapter 14 process, however, this is unlikely. Few firms will fit into category (ii) without already being in category (i). If one were to qualify, it could not use Chapter 14 because it would be expected to soon experience such a run due to ongoing insolvency.

for firms experiencing or about to experience a severe run that lacked any private-sector sources of additional liquidity or for firms that were already deeply insolvent.²⁰

When available, Chapter 14 will be successful if it both generates social welfare gains relative to alternative policy options and offers a mechanism that policymakers in fact choose to use.²¹ As explained below, these success benchmarks will predominantly be met when a firm is failing due to insolvency, rather than other causes.

The social welfare cost of bailouts comes largely through the moral hazard they engender by indemnifying creditors, which encourages instability in financial firms and thereby increases the frequency of financial crises. As a theoretical proposition, it is relatively uncontested that Chapter 14, like Chapter 11, will eliminate most moral hazard because, unlike bailouts, it will ensure that certain long-term creditors bear losses that the firm accrues beyond the value of equity. There is one caveat: Chapter 14 (like other recapitalization mechanisms) will prevent short-term creditors from bearing losses, encouraging eligible firms to use more short-term debt. Fortunately, this problem can be managed through straightforward regulatory rules. In part to address a similar incentive scheme generated by SPOE, regulators are already developing floors for the amount of long-term and subordinated debt that eligible firms must hold in the future.²² These floors will ensure that a sufficient portion of financial firms' creditors are at risk and therefore

20. See SPOE Fed. Reg., "The Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy," 78 Fed. Reg. 76,614.

21. See also Jacopo Carmassi and Richard Herring, "The Cross-Border Challenge in Resolving Global Systemically Important Banks," chapter 9 in this volume (discussing a longer but similar list of objectives propounded by the FSB and arguing, as I do here, that the most challenging objective is making resolution credible).

22. See, e.g., Stanley Fischer, "The Great Recession: Moving Ahead," speech at conference sponsored by the Swedish Ministry of Finance, Stockholm, August 11, 2014, <http://www.federalreserve.gov/newsevents/speech/fischer20140811a.htm> (stating that the United States is preparing requirements for systemically important US financial institutions to issue a certain amount of debt that could be left behind in a recapitalization).

reduce moral hazard relative to bailouts, where no creditors are at risk. Consequently, creditors will help to ensure that financial firms stay sufficiently far from the brink of failure. In the end, this will reduce the frequency of crises and thereby enhance long-term social welfare.

The analysis is similar for SPOE. The primary difference is that Chapter 14's provisions would be required by law whereas SPOE is only one possible manner in which the Federal Deposit Insurance Corporation (FDIC) could exercise its expansive powers under the Dodd-Frank Act. Under Chapter 14, all parties would know, in advance and in a clear and predictable manner, how and approximately when losses will be allocated. Under the Dodd-Frank Act, the FDIC retains substantial discretion to allocate losses as it sees fit. In particular, the act allows the FDIC to use the orderly liquidation fund (OLF) to loan taxpayer funds to a failing firm, funds which could ultimately be lost if the firm fails to recover (first by the firm, then by the industry).²³ The ongoing uncertainty as to precisely how, and to whose benefit, the FDIC's Title II powers will be used prevent SPOE from reducing moral hazard as much as would Chapter 14, though the more convinced the marketplace becomes of the FDIC's intent, the more similar the two proposals become in this respect.

Unfortunately, because clear details about the implementation of BRRD in EU member states will not emerge until 2016, it is too soon to say how it would compare to the SPOE and Chapter 14 options.²⁴

23. See also David Skeel, "Financing Systemically Important Financial Institutions in Bankruptcy," chapter 3 in this volume, discussing the mechanics of the OLF and comparing it to alternative funding options.

24. Council and Parliament of the European Union, "Directive 2014/59/EU of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions and investment firms," May 15, 2014, Article 60a, sections 1–2, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0059&from=EN>. See Andreas Dombret and Patrick Kenadjian, eds., *The Bank Recovery and Resolution Directive: Europe's Solution for "Too Big to Fail"?* (Frankfurt am Main, Germany: Institute for Law and Finance, 2013); Pierre-Henri Conac, "Bank Resolution and 'Bail-In': The European Approach," (presentation August 8, 2014, on file with the author).

The more concerning question is not whether Chapter 14 will help to reduce moral hazard but rather whether policymakers will allow it to be used or will instead seek to invoke Title II (by finding bankruptcy to be insufficient to safeguard systemic risk) or to pass new legislation. Even if a failing firm has yet to experience a run, policymakers will fear that a run might occur after resolution, that such a run might turn into a cascade, and that such a cascade might cause systemic effects. Because the bailout alternative can generally prevent runs, policymakers will only use Chapter 14 if they are convinced it can forestall a run.

Runs occur for a variety of reasons. The most prominent, and the reason that best explains Lehman Brothers' case, is that the institution has become insolvent. Fortunately, it is these cases of insolvency-driven runs that Chapter 14 is best situated to address and prevent.

An insolvency-driven run occurs when depositors or short-term lenders believe a bank's assets are worth less than the cost of its liabilities. Figure 7.1 shows one way that insolvency can arise. The dealer bank in 7.1(A), whose balance sheet is modeled on Lehman's, has three kinds of assets: cash, encumbered assets backing secured loans, and unencumbered financial products, including other loans and investments. These are financed by repurchase agreements, other secured lending, deposits in commercial banking subsidiaries, long-term bonds (including some that are subordinated), and a small amount of equity. In 7.1(B), financial-product valuations fall sufficiently to cause the cost of liabilities to exceed the value of assets. 7.1(C) shows that this devaluation more than eliminates book equity, rendering the firm insolvent. If the firm can provide no private information that its assets are worth more than markets suspect, then it cannot obtain additional financing and will fail.

Insolvency drives runs by converting a bank's relationship with its creditors into the equivalent of a prisoner's dilemma. Consider the example of First Commercial Bank with two depositors, Anne and Bob, who have each deposited \$10. With Anne and Bob's funds, First Commercial made a \$20, 10 percent interest loan to Curly, for a total of \$22 to be repaid. Anne and Bob come to believe Curly will default and pay only \$18, rendering First Commercial insolvent. If

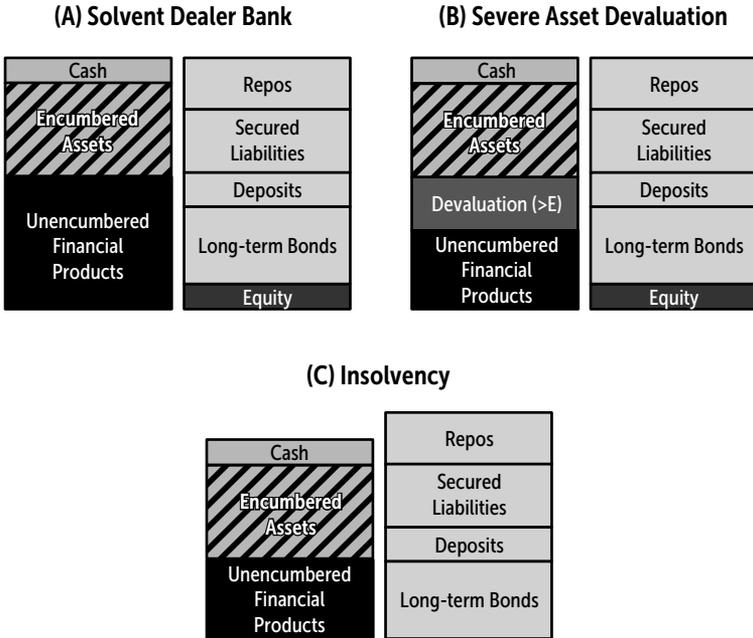


Figure 7.1. Insolvency Event for a Dealer Bank

First Commercial tries to sell the loan to Second Commercial, Second will want to conduct enough due diligence to be sure Curly will repay \$18. If Second does not have time for due diligence before buying the loan, it will pay only the fire-sale price of \$12 due to its uncertainty. Consistent with the classic prisoner’s dilemma outcome, if Anne and Bob both stay and split the proceeds from the loan, each will get \$9. If one runs while the other stays, the runner will be repaid at \$10 while the one who stays will receive only \$2. If both run, each will get \$6.²⁵ Accordingly, in equilibrium both run and First Commercial fails. The

25. Graphically, the example looks as follows:

| | | | |
|------|------|-----------|-----------|
| | | Bob | |
| | | Stay | Run |
| Anne | Stay | \$9, \$9 | \$2, \$10 |
| | Run | \$10, \$2 | \$6, \$6 |

same process plays out for dealer banks' more complex structures, particularly if investments become illiquid and then fall in value.

Chapter 14, invoked in a timely manner, solves this problem and prevents the insolvency-driven run from occurring. When long-term and subordinated debt exceeds the extent of insolvency by a substantial amount—a requirement for Chapter 14's use in the first place²⁶—Chapter 14 will leave a formerly insolvent bank solvent, as in 7.2(B), and therefore eliminate incentives to run. Note that the ultimate value of equity in 7.2(B) is less than the value of long-term debt in 7.2(A) due to costs associated with the recapitalization, but the 7.2(B) bank is nonetheless solvent. The new regulations the Fed is developing should ensure this outcome in the majority of cases.

Moreover, when long-term debt and subordinated debt are sufficient to cover both the insolvency gap and international friction costs associated with Chapter 14,²⁷ not only do short-term lenders lack incentives to run after Chapter 14's use, but the expectation of its use reduces *ex ante* uncertainty about runs as well. As the firm proceeds toward insolvency, Chapter 14 acts similarly to deposit insurance. Because the Fed can access private information unavailable to the marketplace and because its incentives are aligned with creditors', its pledge to invoke Chapter 14 in a timely manner retains insurance's sovereign credibility, without putting taxpayers at risk or subsidizing debt financing. This feature of Chapter 14 also reduces the likelihood that the solvency gap will become so large through inaction as to exceed the available cushion of long-term and subordinated debt. If short-term unsecured lenders expect Chapter 14 to be invoked as soon as private information indicates an eligible firm is insolvent, then runs driven by concern about insolvency alone should be eliminated.

In summary, for firms that fail due to insolvency and that, due to regulation or choice, have more than enough long-term and subordi-

26. See discussion above noting that debt will almost always need to be sufficient to cover the depth of insolvency in order to meet Chapter 14's adequate-assurance standard.

27. See discussion in part IV.A.

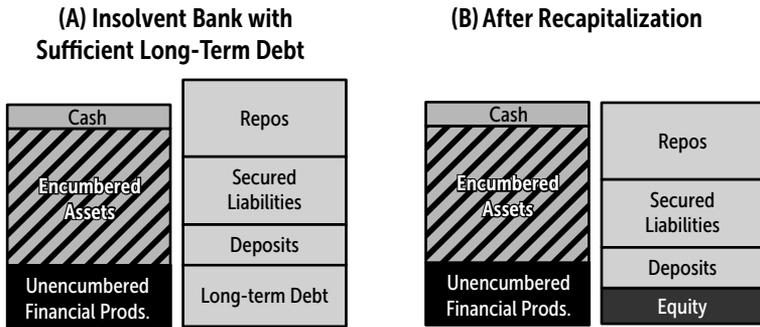


Figure 7.2. Recapitalization's Ability to Stop Runs Sparked by Insolvency

nated debt to cover their insolvency gap, Chapter 14 can be expected both significantly to reduce moral hazard relative to bailouts and significantly to reduce the risk of runs relative to Chapter 11. The next three parts address actual execution.

Part II. The Lehman Brothers Case

Many scholars have documented Lehman Brothers' demise,²⁸ but none have undertaken a precise analysis of its liquidity and balance-sheet

28. See, e.g., Anton R. Valukas, "Lehman Brothers Holdings Inc. Chapter 11 Proceedings Examiner's Report," 2010; James W. Giddens, "Trustee's Preliminary Investigation Report for the Securities Investors Protection Act (SIPA) Liquidation of Lehman Brothers, Inc.," 2010; Mark Roe and Stephen Adams, "Restructuring Failed Financial Firms in Bankruptcy: Learning from Lehman," *Yale Journal on Regulation* (forthcoming 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2512490##; Kimberly Summe, "An Examination of Lehman Brothers' Derivatives Portfolio Postbankruptcy: Would Dodd-Frank Have Made a Difference?" in Scott and Taylor, *Bankruptcy Not Bailout*; David A. Skeel, *The New Financial Deal: Understanding the Dodd-Frank Act and Its (Unintended) Consequences* (Hoboken, NJ: John Wiley & Sons, 2011); Lawrence McDonald and Patrick Robinson, *A Colossal Failure of Common Sense: The Inside Story of the Collapse of Lehman Brothers* (New York: Three Rivers Press, 2010); Christopher Harress and Kathleen Caulderwood, "The Death of Lehman Brothers: What Went Wrong, Who Paid the Price and Who Remained Unscathed Through the Eyes of Former Vice-President," *International Business Times*, September 13, 2013.

challenges using the discovery and court documents available from Lehman's case. This part does so, focusing on those facts relevant to constructing a counterfactual Chapter 14 case in parts III and IV.

A. Lehman's Path to Failure and Structure upon Demise

In January 2008, Lehman Brothers was the fourth largest US investment bank and a highly respected global financial institution. It announced record revenues for 2007, had a \$35 billion market capitalization, and held around \$700 billion in assets.²⁹ Virtually no one expected a corporate default. Less than eight months later, on September 15, 2008, deemed insolvent and entirely out of cash, Lehman filed for bankruptcy. Market prices reflected around \$54 billion of value losses relative to book as soon as the court proceedings began.³⁰

Critically important to the workings of Chapter 14's section 1405 transfer and to SPOE is that, like most US-based large financial institutions, Lehman had a hub-and-spoke corporate structure. A holding company at the top, Lehman Brothers Holdings Inc. (Holdings), managed most long-term financing³¹ while eight thousand operating subsidiaries around the globe ran business operations and managed short-term financing.³² Key legal entities are shown in figure 7.4.

Though Lehman was predominantly a dealer-bank, its subsidiaries' legal identities varied widely. The two most important were Lehman Brothers Inc. (LBI) and Lehman Brothers International (Europe) (LBIE), Lehman's New York- and London-based broker-dealers. In addition, Lehman owned insured banks in Germany and the United States and many subsidiaries that specialized in real estate investments

29. Data from Bloomberg (on file with author); Lehman Brothers Holdings, Inc., Annual Report for 2007 (Form 10-K), February 28, 2008: 29, 33.

30. Calculated from data underlying figure 7.5.

31. Lehman Brothers, "Company Overview: Third Quarter 2007," Bates Stamp LBEX-LL 2165164: 2.

32. Statement by Harvey Miller, lead attorney for Lehman Bankruptcy Filing, at Federal Reserve Resolution Conference, October 18, 2013; Lehman Brothers, Liquidity Summary 091309 6pm.xls, Bates Stamp LBEX-DOCID 647325, 8 (noting LBI held 54.5 percent and LBIE 44 percent of all repo).

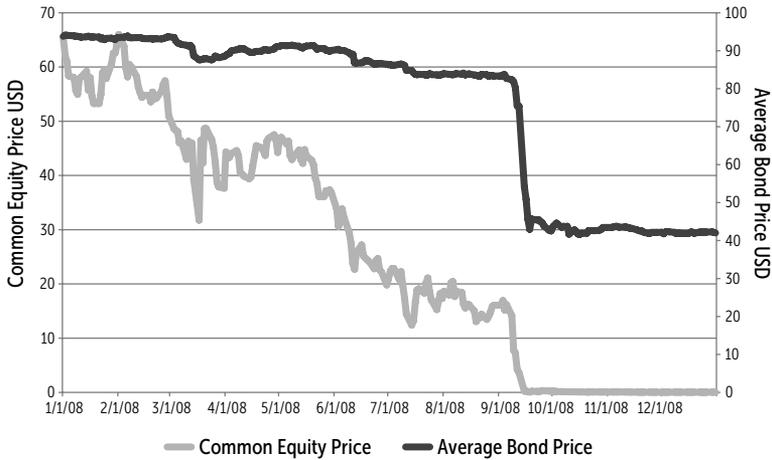


Figure 7.3. Lehman Stock and Bond Prices January–December 2008

Source: Based on data from Thomson Reuter’s Datastream (on file with the author). Bond prices reflect the average of all prices available as of April 2014 across all issuances with pricing within 15 percent of par as of January 2008, to approximately capture most issuances representing Lehman’s outstanding long-term debt, while also excluding more exotic instruments.

or derivatives trading.³³ The legal boundaries between these entities did not, however, map to Lehman’s primary business lines of investment banking, investment management, and capital markets.³⁴ Rather, Lehman operated its businesses in a globally integrated manner that left thousands of legal entities in dozens of jurisdictions intricately intertwined from both profitability and operational standpoints. This fact is partially responsible for the chaotic and expensive nature of Lehman’s Chapter 11 bankruptcy;³⁵ in a Chapter 14 section 1405 transfer

33. Lehman, “Company Overview,” 2; Lehman, “List of Subsidiaries” (Lehman Brothers, “Exhibit 21.10: List of the Registrant’s Subsidiaries,”) in Lehman, 2007 10-K.

34. Lehman, 2007 10-K, 3. See also Carmassi and Herring, “Cross-Border Challenge” (discussing the extent of complex mismatches between legal entities and businesses in the industry as a whole).

35. Author interview with staff at the Lehman Estate, October 13, 2014 (notes on file with the author).

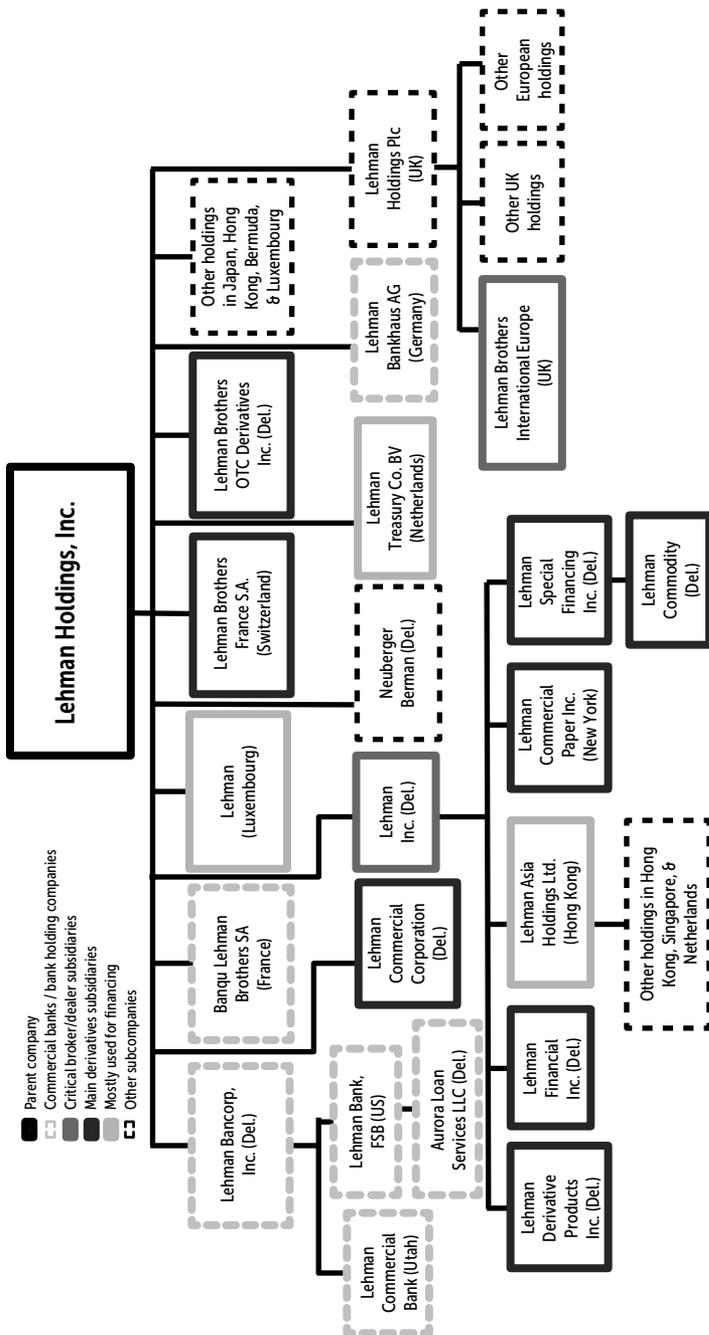


Figure 7.4. Lehman Corporate Structure
 Source: Adapted from Lehman Brothers, "Company Overview: Third Quarter 2007," Bates Stamp LBEX-LL 2165164, 2.

proceeding, at least initially, none of these subsidiaries would go through bankruptcy.

Capital markets served as Lehman's primary financial intermediation segment, held 98 percent of Lehman's assets,³⁶ and was the underlying cause of Lehman's downfall. Most products with which capital markets worked were standard and relatively liquid, but its real estate-related investments became increasingly opaque and illiquid over 2007.³⁷ During that year, Lehman raised only \$3 billion of equity³⁸ but added—both purposefully and accidentally³⁹—around \$89 billion of hard-to-value assets to its balance sheet,⁴⁰ far more proportionately than peer firms.⁴¹ By early 2008, Lehman held hard-to-value assets that it marked at \$265 billion against only \$26 billion of equity.⁴² A market determination that these assets were worth only 90 percent of what Lehman estimated would render the firm insolvent.

Market prices for Lehman's debt and equity over 2008 reveal that it took markets some time to determine how little Lehman's assets were

36. Lehman Brothers Holdings, Inc., "Quarterly Report for the Quarter Ending May 31, 2008 (Form 10-Q)," 22; Lehman, "2007 10-K," 102.

37. Lehman, "Q2 2008 10-Q," 21, 75.

38. Lehman, "2007 10-K," 30.

39. While Lehman's commercial real estate acquisitions were purposeful (Valukas Report, 103–17), its accumulation of residential mortgage-backed securities appears to have been accidental; *ibid.*, 59–65. Lehman's banks originated many mortgages that Lehman planned to securitize and sell to third parties, but by the time it curtailed mortgage origination in Q2 2007 it had become very hard to sell the residential mortgage-backed securities it had accumulated; *ibid.*, 82–95.

40. Author's analysis, counting assets likely later categorized as Level 2 and 3 that appear in Lehman, "Q2 Factbook," June 13, 2008, Bates Stamp LBHI-SEC07940_593047, 17; and Lehman, "2007 10-K," 107. The Level 2 and 3 categorization was not common practice until 2008.

41. See Barclays Bank, "Long Island Transaction Overview," September 12, 2008, Bates Stamp BCI-EX-(S)-00053306, 12, 14 (noting Barclays' concern with Lehman's accumulated assets); compare Goldman Sachs, "Quarterly Report (Form 10-Q)," February 28, 2007: 20.

42. Figures calculated from Lehman Brothers Holdings, Inc., "Quarterly Report for the Quarter Ending Feb. 29, 2008 (Form 10-Q)": 6, 19, 23. The \$265 billion figure includes all Level 2 and 3 assets and all real estate held for sale as of February 2008.

worth. As the value of assets equals the sum of the values of liabilities and equity, markets implicitly value assets when they value debt and equity instruments. In figure 7.5, I have used this identity to chart Lehman's "solvency equity" value: the difference between the approximate market valuation of Lehman's assets and the par cost of Lehman's liabilities.⁴³ The other two series additionally show Lehman's book equity (top) and the difference between book equity and solvency equity (bottom), or the amount by which the market was implicitly discounting the value of Lehman's assets.

As the figure illustrates, on a solvency-equity basis, by June 2008 markets already believed Lehman's assets to be worth \$18 billion less than Lehman claimed⁴⁴ and its equity to be worth less than 2 percent of the value of its assets,⁴⁵ the point known as "critical undercapitalization" in banking parlance.⁴⁶ But they did not yet believe Lehman to be insolvent. As the summer proceeded, lenders and investors became increasingly concerned by three factors: Lehman's first write-downs as a public company;⁴⁷ Lehman's inability to find a strategic partner who would make a large equity investment;⁴⁸ and continued uncertainty

43. The Valukas Report coined the phrase "solvency equity." See Valukas Report, Appendix 21.

44. See the market discount from book series in figure 7.5. Book equity was marked at \$28 billion (see table 7.1) while solvency equity was only \$10 billion, \$18 billion less.

45. With June 2008 asset valuations of \$639 billion, 2 percent would have been \$13 billion.

46. See Federal Deposit Insurance Corporation, "2000—Rules and Regulations: Subpart B—Prompt Corrective Action section 325.103(b)(5)," FDIC Law, Regulations, Related Acts, June 30, 2014, <http://www.fdic.gov/regulations/laws/rules/2000-4500.html>.

47. Lehman, "Q2 2008 10-Q," 24; Jenny Anderson, "Shares of Lehman Brothers Take a Beating," *New York Times*, July 11, 2008 (noting that the write-downs left Lehman "struggling against a tide of rumors, none substantiated but all magnified by fears about the true value of its assets that cannot be easily sold and the bleak prospects for its business in a weak economy").

48. Valukas Report, 618–24. By then, discussions had already ended with the Kuwait Investment Authority and Berkshire Hathaway. Thereafter, Lehman failed

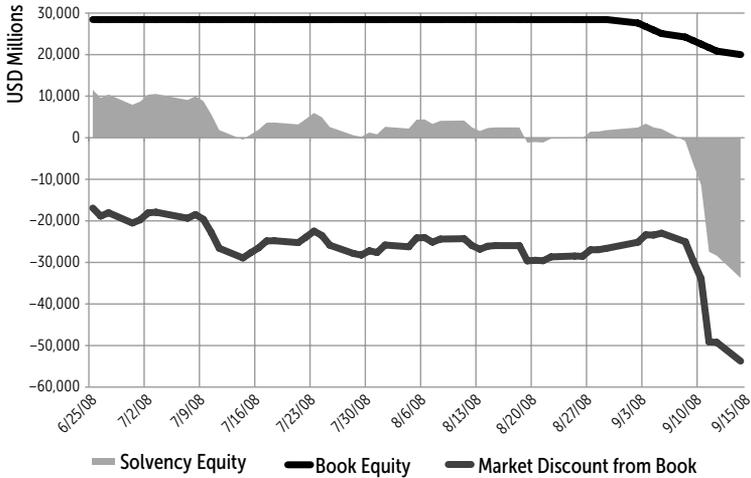


Figure 7.5. Market Valuation of Lehman's Solvency Equity

Source: Based on data from Thomson Reuter's Datastream and Bloomberg. Underlying calculations on file.

Note: The figure charts an approximation of the value $S \equiv (L_m + L_u) + (e_p + e_c) - L$ where L_m is the market value of market-traded liabilities, L_u is the book value of untraded liabilities, e_c is the market value of common stock, e_p is the estimated market value of preferred stock, and L is the par value of all liabilities. For market-traded liabilities, the figure uses representative bonds maturing over different time frames and a breakdown of the maturity schedule of all of Lehman's bonds to estimate an overall market valuation of all traded bonds and commercial paper. For preferred equity, the figure uses pricing from the February 2008 issuance, which was the most regularly traded of recent issuances, to price all outstanding preferred issuances accordingly.

about asset valuations.⁴⁹ The cumulative result of these concerns was a steady decline in markets' estimates of the value of Lehman's equity to near zero throughout late summer.

Lehman, of course, had a different view of the book value of its assets and equity. Due to their importance to part III below, it is useful to briefly review the latest-dated data about both Lehman's consolidated

to complete potential deals with MetLife and Investment Corp. of Dubai. On September 1, it rejected a deal from Korea Development Bank; *ibid*.

49. Barclays, "Long Island," 3–4, 12, 14; Giddens Report, Exhibit C 4 (discussing David Einhorn's allegations).

balance sheet and Holdings' portion of this consolidated whole. Table 7.1 summarizes the (incomplete) data available.

For Chapter 14's purposes, the most notable feature of this table is how columns (1) and (2) compare. Relative to Lehman as a whole, Holdings' balance sheet included almost no derivatives, repos (repurchase agreements), or reverse repos.⁵⁰ Rather, 83 percent of Holdings' assets were advances to and equity in subsidiaries; the remainder was mostly unencumbered financial instruments.⁵¹ Holdings' balance-sheet liabilities were comprised of nearly all of Lehman's unsecured debt—\$3 billion of commercial paper and \$96 billion of long-term and subordinated debt⁵²—as well as debts to subsidiaries. Though not reflected in the balance sheet, Holdings additionally guaranteed certain subsidiaries in their entirety⁵³ as well as individual subsidiary contracts with third parties. These guarantees ultimately comprised over one-third of the claims against Holdings.⁵⁴ In fact, allowed claims exclusive of guarantee claims were less than Holdings' balance sheet liabilities the day before Lehman's filing.⁵⁵

B. The Insolvency-Driven Run on Lehman

As markets reduced valuations of Lehman's assets, Lehman experienced a slow drain on liquidity, but not an all-out run.⁵⁶ By the end

50. *De minimis* amounts of derivatives omitted from the table by rounding.

51. Lehman Brothers, "Liquidity Management at Lehman Brothers," Bates Stamp LBEX-DOCID008669, May 15, 2008: 31 (noting that Holdings' non-subsidiary funding assets were supported by cash capital; everything supported by cash capital was unencumbered).

52. Table 7.1. Long-term debt includes both long-term borrowings and current portion of long-term debt.

53. Lehman, "Company Overview," 2.

54. Author's calculation relying on Lehman's Third Plan Disclosure, "Lehman Brothers Holdings, Inc. and its Affiliated Debtors, Debtors' Disclosure Statement for Third Amended Joint Chapter 11 Plan," August 31, 2011: 499.

55. Compare table 7.1 with table 7.3.

56. Author's analysis, based on data from Lehman Brothers, "Liquidity Update," Bates Stamp LBEX-WGM 784543, September 11 2008: 86-87, 96; Lehman, "5/15/08 Liquidity," 82, 84, 85; Lehman Brothers, "2008 Q2 Liquidity Metrics," Bates Stamp LBHI_SEC07940_601022, 41, 42, 49.

of the third quarter, two weeks before its demise, Lehman marked its book equity at \$28 billion.⁵⁷ As figure 7.5 shows, markets disagreed, valuing equity under \$2 billion. In fact, information unavailable to markets, but available to regulators, indicated that Lehman was worth even less: the \$2 billion valuation reflected expected third-quarter (Q3) common-stock losses of \$2.3 billion.⁵⁸ As Lehman already knew and regulators could have known, Q3 common-stock losses were actually \$4.1 billion,⁵⁹ a difference just large enough to eliminate market perceptions that Lehman was solvent.

Predictably, therefore, when on Wednesday, September 10, Lehman publicly announced its Q3 losses,⁶⁰ credit default swap spreads ballooned and ratings agencies threatened to downgrade Lehman if it did not arrange for an acquisition or capital injection over the weekend.⁶¹ Over the course of the week in which this announcement was made, Lehman lost approximately \$30 billion of liquidity and ended the week with \$3 billion more debts due on Monday morning, September 15, than it had cash with which to pay them.⁶² Lehman's story is entirely consistent with the theory that lenders stayed so long as they continued to believe the firm to be solvent, and then ran as soon as they learned otherwise.

Due to its relevance to assessing New Lehman's liquidity in part IV, it is helpful to review how Lehman lost \$30 billion of liquidity in only a week. Figure 7.6 summarizes data drawn from Lehman's discovery documents.

57. Lehman Brothers Holdings, Inc., "Current Report (Form 8-K), Ex. 99.1," September 10, 2008.

58. Author's calculation, multiplying expected losses of \$3.35 per share by shares outstanding. See Lehman Brothers, "Liquidity of Lehman Brothers," Bates Stamp LBEX-WGM 787681, October 7, 2008: 91 (noting expected losses per share).

59. Lehman, 9/10/08 8-K, Ex. 99.1, 1.

60. *Ibid.*

61. Lehman, "10/7/08 Liquidity," 91–92.

62. Author's calculation based on data from *ibid.*, 90, 93, 94, 97, 99; Lehman, "9/13/08 Liquidity Summary," 25.

Table 7.1. Lehman's and Holdings' Balance Sheets

| | (1) All Lehman 8/31/08 | | (2) Holdings 9/14/08 | |
|--|---------------------------|---------------|-------------------------|---------------|
| | USD billions | % of total | USD billions | % of total |
| ASSETS | | | | |
| Cash, equivalents, and segregated securities | 20 | 3 | 103 | 5 |
| Financial instruments & inventory positions | 256 | 43 | 23 | 11 |
| Liquid assets | 47 | 8 | 6 | 3 |
| Real estate-related assets | 78 | 13 | 11 | 5 |
| Corporate debt, equities, & loans | 85 | 14 | 6 | 3 |
| Derivatives and other contracts | 46 | 8 | 0 | 0 |
| Reverse repos and borrowed securities | 273 | 46 | 0 | 0 |
| All other | 50 | 8 | 179 | 85 |
| Receivables from subsidiaries | N/A | | 147 | 70 |
| Equity in net assets of subsidiaries | N/A | | 26 | 13 |
| Receivables from third parties | 37 | 6 | 1 | 0 |
| Other assets | 9 | 2 | 2 | 1 |
| Identifiable intangibles and goodwill | 4 | 1 | 0 | 0 |
| TOTAL ASSETS | 598 | | 209 | |
| LIABILITIES & EQUITY | | | | |
| Short-term & current long-term debt | 26 | 4 | 19 | 9 |
| Current portion of long-term debt | 22 | 4 | 16* | |
| Commercial paper | 4 | 1 | 3* | |
| Short positions | 154 | 26 | 0 | 0 |
| Repos | 160 | 27 | 0 | 0 |
| Accrued liabilities and payables | missing | | 1 | 0 |

(continued)

Table 7.1. (continued)

| | (1) All Lehman 8/31/08 | | (2) Holdings 9/14/08 | |
|------------------------------|---------------------------|---------------|-------------------------|---------------|
| | USD billions | % of total | USD billions | % of total |
| Owed to subsidiaries | N/A | | 88 | 42 |
| Deposits at banks | 29 | 5 | 0 | 0 |
| Long-term borrowings | 115 | 19 | 80 | 38 |
| Senior notes | 97 | 16 | 65 | 31 |
| Subordinated notes | 17 | 3 | 15 | 7 |
| TOTAL LIABILITIES | 569 | 95 | 189 | 90 |
| Preferred equity | 9 | 2 | 9 | 4 |
| Common equity | 19 | 3 | 11 | 5 |
| TOTAL EQUITY | 28 | 5 | 20 | 10 |
| TOTAL LIABILITIES AND EQUITY | 598 | | 209 | |

Source: Based on data from Lehman Brothers, “Funding Lehman Brothers” (September 11, 2008), Bates Stamp LBEX-DOCID 008482, 7, 10, 15; In re Lehman Brothers Holdings, Inc, et al., Monthly Operating Report Balance Sheet as of September 14, 2008, available at www.sec.gov/Archives/edgar/data/806085/000090951809000059/mm01-3009_8ke991mor.htm; Lehman Brothers Holdings, Inc., Current Report (Form 8-K) (Sept. 10, 2008).

Note: Lehman went bankrupt before it released figures for its final quarter. The sources above fill most gaps, but imperfectly and sometimes in conflicting ways. Asterisks indicate approximations based on the author’s analysis of source documents listed. Though no breakdown between commercial paper and the current portion of long-term debt was available, other discovery documents state that commercial paper stood at \$3 billion at Lehman’s demise.

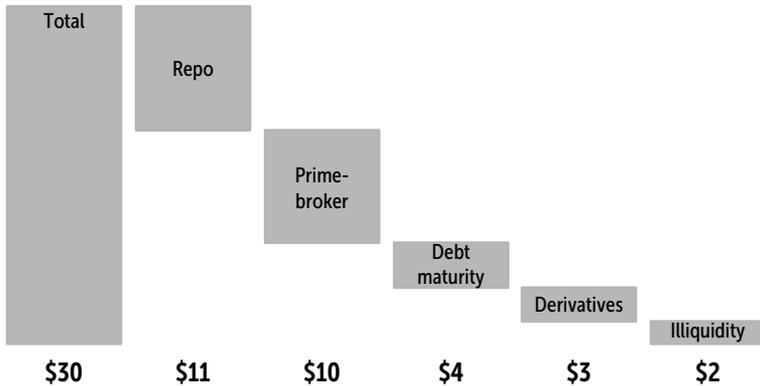


Figure 7.6. Liquidity Losses over Lehman's Final Week

Source: Based on data from Lehman Brothers, "Liquidity of Lehman Brothers," Bates Stamp LBEX-WGM 787681 (October 7, 2008), 90, 93, 94, 97, 99; Lehman Brothers, "Liquidity Summary 091309 6pm.xls," Bates Stamp LBEX-DOCID 647325, 25.

Lehman's most substantial drain on cash, approximately \$11 billion, related to difficulties with its repo financing. Of this, \$4.5 billion⁶³ went to address \$48 billion of lending that failed to roll over.⁶⁴ (Lehman successfully used its overfunding policy⁶⁵ and collateral liquidation⁶⁶ to address the rest.) In addition, Lehman used \$6.5 billion to meet haircut increases by tri-party lenders and collateral calls by clearing banks.⁶⁷

63. Author's calculation based on data from Lehman, "10/7/08 Liquidity," 90, 97; Lehman, "9/13/08 Liquidity Summary," 2.

64. Author's calculation based on data from Lehman, "9/13/08 Liquidity Summary," 2.

65. Lehman borrowed hard-to-fund collateral and committed it to tri-party investors for cash, so that if investors in Lehman's own collateral began to run, Lehman could return the borrowed collateral and use the same commitments to fund its own collateral. It also secured contractual commitments exceeding what was lent. At the beginning of Q3, these two strategies left Lehman with a \$27 billion "cushion" to absorb repo lender losses without needing to liquidate collateral. Lehman, "9/11/08 Funding Slides," 82.

66. *Ibid.*, 91, 95.

67. Author's calculation based on data from Lehman, "10/7/08 Liquidity," 90, 93, 97; Lehman, "9/13/08 Liquidity Summary," 2.

The second largest drain came from London's prime broker operations, which caused \$10 billion of losses.⁶⁸ Typically, UK prime brokerage generated excess cash because customers' trading positions could be pledged in the tri-party markets through rehypothecation.⁶⁹ LBIE generally relied on this cash to meet customer demands for withdrawals. Over the third quarter, however, UK clients limited rehypothecation to the point that LBIE had almost no cash left and then, in Lehman's final week, clients demanded the return of \$23 billion.⁷⁰ Without cash to meet these demands at LBIE, Lehman drew \$10 billion of liquidity from the general pool.

A variety of costs accounted for the remaining outflows. Lehman paid \$3 billion to meet margin increases on derivatives.⁷¹ Another \$2 billion became hard to monetize due to Lehman's fleeing repo lenders.⁷² And \$4 billion more went to satisfy maturing debts as they came due, including commercial paper, bank funding, and long-term-debt maturities.⁷³ By September 12, Lehman was "essentially devoid of any liquidity for operations."⁷⁴ Holdings had only \$1.4 billion remaining in its liquidity pool and LBIE ended the week with a \$5 billion deficit.⁷⁵

C. Systemic Effects after Lehman's Collapse

Though perceived insolvency drove its failure, Lehman's lack of financing proximately caused its filing. Without cash to pay its creditors on Monday morning, LBIE had to enter administration to avoid

68. Author's calculation based on data from Lehman, "10/7/08 Liquidity," 93, 97.

69. Lehman, "5/15/08 Liquidity," 16–17. This practice was not allowed in the United States. *Ibid.*

70. Lehman, "10/7/08 Liquidity," 85, 93, 97.

71. *Ibid.*, 91.

72. *Ibid.*, 90.

73. *Ibid.*

74. Harvey Miller and Maurice Horowitz, "Resolution Authority: Lessons from the Lehman Experience," conference presentation, April 11, 2013, slide 12, http://www.stern.nyu.edu/cons/groups/content/documents/webasset/con_041232.pdf.

75. Lehman, "10/7/08 Liquidity," 90.

criminal charges.⁷⁶ Once LBIE was in administration, Holdings would have faced claims by guaranteed derivatives counterparties—“a massive systemic risk”—that would quickly consume its remaining cash.⁷⁷ With no alternative, Holdings filed for Chapter 11 bankruptcy. Soon, Lehman operating entities entered more than eighty insolvency proceedings in sixteen jurisdictions around the world.⁷⁸ Lehman’s financial information system broke down immediately, preventing Lehman from continuing to operate.⁷⁹

Even today, there is no consensus as to Lehman’s culpability for the ensuing financial crisis.⁸⁰ What is clear is that Lehman’s filing helped to “sen[d] markets across the globe tumbling”⁸¹ and was followed by a classic cascading run. Though many of Lehman’s short-term lenders had run before bankruptcy, a few had rolled over commitments, including the Reserve Primary Fund.⁸² On Tuesday, Reserve Primary determined its claim on the Lehman Estate to be worthless and revalued its assets as worth less than its liabilities, breaking the buck.⁸³ Money-market investors ran and, as one Fed economist stated, “[i]t was overwhelmingly clear that we were staring into the abyss—that

76. Insolvency Act 1986, c. 45 section 214 (UK) (creating personal liability for directors who allow trading if they “knew or ought to have concluded that there was no reasonable prospect that the company would avoid going into insolvent liquidation”).

77. Lehman Brothers, “Minutes of the Board of Directors,” Bates Stamp LBEX-AM 003932, September 14, 2008: 2.

78. Miller and Horowitz, “Lessons.”

79. *Ibid.*

80. See discussion in Introduction, this chapter.

81. Susanne Craig, Jeffrey McCracken, Jon Hilsenrath, and Deborah Solomon, “AIG, Lehman Shock Hits World Markets,” *Wall Street Journal*, September 16, 2008.

82. The Fund’s investment manager later said that he rolled over because “like many other investors . . . I assumed that the federal government would [as with Bear Stearns] save the day if Lehman or one of the other investment banks, which were much larger and posed greater apparent systemic risks, ran into trouble.” FCIC, “The Financial Crisis Inquiry Report,” 356.

83. See Condon, “Reserve Primary Money Fund Falls Below \$1 a Share.” Ex post, it is clear this was an overreaction. See table 7.3.

there wasn't a bottom to this—as the outflows picked up steam on Wednesday and Thursday.”⁸⁴ Within a week prime funds had lost \$349 billion and stopped financing commercial paper in efforts to preserve their ability to meet redemptions.⁸⁵ Consequently, many non-financial corporations who had relied on short-term unsecured funding markets lost the financing they needed to meet payroll and restock inventories.⁸⁶

An outflow at prime brokers mirrored that at money markets. In the week after Lehman's filing, hedge funds pulled \$86 billion out of Morgan Stanley and only slightly less out of Goldman Sachs, in part due to concerns about bankruptcy treatment.⁸⁷ The run also spread to insured commercial banks. The two least stable fell quickly. On September 25, the FDIC seized Washington Mutual and sold most operations to J. P. Morgan.⁸⁸ The weekend after, the FDIC estimated Wachovia would face \$115 billion of withdrawals. Wells Fargo bought it the next Friday.⁸⁹

The threat to commercial banks and the skyrocketing cost of commercial paper caused the panic to soon endanger ordinary consumers' ability to use credit and debit cards.⁹⁰ In response, Congress passed the \$700 billion Troubled Asset Relief Program and undertook other measures to allow the government to increase insurance for commercial deposits, directly fund commercial paper, guarantee banks' long-term debt, and take equity stakes in nine institutions holding 75 percent of US bank assets.⁹¹ These and related measures ultimately halted the cas-

84. FCIC, “The Financial Crisis Inquiry Report,” 357 (quoting Fed economist Patrick McCabe).

85. *Ibid.*, 357–59.

86. *Ibid.*, 358–59.

87. Bradley Keon, “Morgan Stanley at Brink of Collapse Got \$107 Billion from Fed,” *Bloomberg*, August 22, 2011, <http://www.bloomberg.com/news/2011-08-22/morgan-stanley-at-brink-of-collapse-got-107b-from-fed.html>.

88. Robin Sidel, David Enrich, and Dan FitzPatrick, “*WaMu Is Seized, Sold Off to J. P. Morgan*, In *Largest Failure in U.S. Banking History*,” *Wall Street Journal*, September 26, 2008.

89. FCIC, “The Financial Crisis Inquiry Report,” 367–70.

90. *Ibid.*, 358–59.

91. *Ibid.*, 372–75. The nine institutions were Citigroup (\$25 billion), JP Morgan (\$25 billion), Wells Fargo (\$25 billion), Bank of America (\$15 billion), Goldman

cading run across the shadow and commercial bank systems. But by the end of 2008, many policymakers believed that allowing any more “systemically important” firms to go bankrupt would generate costs exceeding those of bailouts, at least in the near term. As one official described the government’s thinking about Citigroup in November 2008: “The main point is to let the world know that we will not pull a Lehman.”⁹²

Part III: How a Chapter 14 Counterfactual Could Have Proceeded

Taking the facts above as given, this part explores how a counterfactual Lehman case in Chapter 14 might have proceeded, had Chapter 14 and other reforms been available back in 2008. I have chosen the assumptions below to reflect the most likely legal and regulatory environment that large financial institutions will face in the coming few years, while also recognizing that it is impossible to construct a counterfactual incorporating all second-order pricing and structural changes that will emerge in response to these new regimes.

A. Structure of the Counterfactual World

I assume that the US legal environment includes both Chapter 14 and the Dodd-Frank Act. Pursuant to Dodd-Frank, the Fed regulates Lehman and Lehman describes in a living will how best to resolve itself under Chapter 14.⁹³ Also pursuant to Dodd-Frank, SPOE backstops Chapter 14, but can only be used if regulators certify that Chapter 14 will fail to prevent systemic consequences.⁹⁴ The Dodd-Frank-

Sachs (\$10 billion), Morgan Stanley (\$10 billion), Merrill Lynch (\$10 billion), Bank of New York Mellon (\$3 billion), and State Street (\$3 billion). *Ibid.*, 373–74.

92. *Ibid.*, 380.

93. As Chapter 14 would be the applicable Bankruptcy Code chapter, Dodd-Frank’s requirement that living wills describe bankruptcy resolution, Dodd-Frank Act section 5311(a)(4)(D), (d)(4), would require planning for a Chapter 14 case. See also William Kroener, “Revised Chapter 14 2.0 and Living Will Requirements Under the Dodd-Frank Act,” chapter 8 in this volume.

94. Dodd-Frank Act, section 203(b).

amended Federal Reserve Act section 13(3) disallows firm-specific lending but allows lending programs “with broad based eligibility.”⁹⁵

In addition to this legal framework, I assume that forthcoming Fed regulations consider all subordinated debt and all long-term debt with an original maturity of at least one year to be eligible to be left behind and effectively converted to an equity interest in the event of failure. As with other chapters in this volume, I refer to this eligible debt as capital-structure debt.⁹⁶ I also assume Fed regulations require firms like Lehman to hold debt qualifying as capital structure debt in an amount equal to 20 percent of the book value of their assets, approximately what Lehman owed in 2008.⁹⁷ Notably, this is a similar figure to the total loss-absorbing capacity that Lehman would have to hold

95. Dodd-Frank Act, section 716.

96. See Jackson, “Building on Bankruptcy: Revised Chapter 14,” section 2(6), defining “capital structure debt” to include, more specifically, “unsecured debt (including the under-secured portion of secured debt that would otherwise constitute capital structure debt), other than a qualified financial contract, of the debtor for borrowed money with an original maturity of at least one year that is either (a) of a kind required by the Board or other applicable government agency, (b) contractually subordinated to other unsecured debt, or (c) convertible upon specified financial events or conditions to a security that would have a lower priority in bankruptcy than unsecured debt.” *Ibid.*, section 2(3). For simplicity, I ignore under-secured debt and eligible convertibles.

97. In arriving at this estimate, I assume first that regulators will set a capital-structure-debt floor as high as politics allow. The starting point for this debate is likely to be the levels observed in 2008, around 20 percent. Though raising capital-structure debt requirements will be difficult, it will also be hard to argue for a lower figure without conceding that financial institutions’ long-term debt is subsidized. In Lehman’s bankruptcy, senior bondholders will receive a 27 percent payout; see Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, “Notice Regarding Fifth Distribution Pursuant to the Modified Third Amended Joint Chapter 11 Plan, Exhibit A,” March 27, 2014, whereas in a counterfactual Chapter 14 case, deeming all long-term debt to be left behind in resolution should return above 27 percent for these debt-holders. See part IV.E. Expectations of a greater than 27 percent recovery rate should make borrowing less expensive than expectations of a 27 percent recovery, implying that a 20 percent capital-structure-debt floor will only make debt more expensive if the current expectation is for a bailout.

under new Financial Stability Board regulations. These regulations will require institutions like Lehman to hold a total amount of capital and debt that would qualify as capital-structure debt equal to around 21–25 percent of the risk-weighted value of assets.⁹⁸ Finally, I assume that the Fed initiates and manages Lehman’s Chapter 14 filing, though this need not always be the case.⁹⁹

Internationally, I assume that Lehman and the large majority of its counterparties have signed the International Swaps and Derivatives Association (ISDA) Resolution Stay Protocol.¹⁰⁰ I also assume that BRRD Article 60a has been implemented in Europe and that Chapter 14 is considered a crisis management measure under that article.¹⁰¹ Furthermore, I assume that foreign regulators choose not to place subsidiaries into separate resolution proceedings or to ring-fence foreign-held assets. This could follow from foreign regulators agreeing with the Fed that Chapter 14 should forestall systemic costs globally. But, it is also a significant assumption; many are rightly concerned that international authorities undertaking opposing actions in the event of a financial resolution will undermine any ability to maintain a firm’s operations.¹⁰²

98. See Financial Stability Board, “Adequacy of loss-absorbing capacity of global systemically important banks in resolution,” November 10, 2014. Note, however, that the GLAC requirements are not directly comparable to the assumption of 20 percent capital-structure debt in addition to existing capital. On the one hand, GLAC requires more debt, because long-term debt with a remaining maturity less than one year is excluded from the total. On the other, it requires less because the 21–25 percent figure is relative to risk-weighted and not total assets.

99. Most often, management will be disinclined to file in a timely manner. This was certainly true in Lehman’s actual case. See Miller and Horowitz, “Lessons”: “There was absolutely no intention on the part of Lehman to consider the possibility of bankruptcy . . . [for] any part of the Lehman enterprise.” In other cases, the disinclination to file may be outweighed by Chapter 14’s perceived benefits.

100. International Swaps and Derivatives Association, “ISDA 2014 Resolution Stay Protocol,” November 4, 2014, <http://assets.isda.org/media/f253b540-25/958e4aed.pdf/>.

101. BRRD, Article 60a, sections 1–2.

102. In an effort to encourage the adoption of regimes of mutual recognition for foreign resolution proceedings, the Hoover Institution’s Chapter 14 proposal

Despite the changes in the legal and regulatory environment, I assume that parties nonetheless find themselves with the same information, balance sheets, contractual relationships, operational systems, and market conditions as existed in the fall of 2008. Though the only feasible assumption, this is unrealistic. Among other issues, Lehman's lenders expected to be bailed out.¹⁰³ Had they expected greater chances of bearing losses in the event that Lehman's assets fell in value, they would have charged higher rates of interest, cut exposure, or both. More expensive financing might, in turn, have diminished Lehman's risk-taking and reduced the chances of failure. In addition, much higher capital and liquidity requirements would have made it far less likely that regulators would have allowed Lehman to find itself with the balance sheet and liquidity structure that it did.¹⁰⁴ Nevertheless, a firm with a balance sheet similar to Lehman's in September 2008 may well use Chapter 14. For this reason and simply because Lehman is the only large financial institution to have gone through bankruptcy, this exercise remains valuable.

B. Meeting the Standards for a Chapter 14 Filing

Like Chapter 11, Chapter 14 will be most successful when prepared for in advance. In the counterfactual world, Lehman's living will describes

includes a proposal to amend Section 1506 of the US Bankruptcy Code to provide that a Chapter 14 judge would only be obligated to enforce foreign home-country stay orders or to issue orders barring US ring-fencing if the foreign jurisdiction had already adopted comparable provisions respecting US ancillary proceedings. See Jackson, "Building on Bankruptcy: Revised Chapter 14," section 1(5). Though I assume that this amendment has been made along with all other Chapter 14 Bankruptcy Code amendments, I also assume for the purposes of the counterfactual that no foreign jurisdiction has adopted such provisions and that therefore this amendment has little practical impact. See also discussions in Thomas Huerfias, "A Resolvable Bank," chapter 6 in this volume, and Carmassi and Herring, "Cross-Border Challenge."

103. See discussion of Reserve Primary's expectations in part III.C.

104. See Skeel, "Financing SIFIs," discussing the new reforms, which will require institutions like Lehman to, in the future, maintain around a 10.5 percent consolidated capital ratio and cash sufficient to cover all needs during a thirty-day stress period.

its resolution under Chapter 14.¹⁰⁵ In accordance with that plan, as markets lose confidence in Lehman's assets the Fed and Lehman staff develop three options. They prefer a private acquisition or recapitalization.¹⁰⁶ But, they also plan for Chapter 14 and SPOE.¹⁰⁷ Between the latter two, Chapter 14 is the statutory presumption.¹⁰⁸

The Fed must consult the Treasury and FDIC as it considers filing a Chapter 14 case.¹⁰⁹ In addition, it may involve other domestic and international regulators if doing so is worth the risk of further sapping market confidence. The Fed may also notify members of the special Article III court that will hear the Chapter 14 case, preselected special masters,¹¹⁰ and select private-market participants, if doing so is necessary to prepare the courts for a filing.

The Fed may file for Chapter 14 on Lehman's behalf once it gains sufficient evidence to meet the two Chapter 14 standards.¹¹¹ To begin a case, the Fed must certify that Chapter 14 is necessary to avoid serious adverse effects on US financial stability.¹¹² Additionally, the Fed must be prepared to certify within twenty-four hours that a recapitalized bridge company will provide adequate assurance of future performance on assumed contracts.

To make an adequate-assurance finding, the Fed must assess (a) whether Lehman has enough cash to continue in business following

105. See discussion in part III.A.

106. This preference was notable in Lehman's actual case, as recounted in the Valukas Report, 1516–22. Because neither Chapter 14 nor Title II was available, developing a private-sector option consumed all attention. When that failed, Chapter 11 was the only option left. *Ibid.*, 1523–36.

107. Lehman is eligible for Chapter 14 as a corporation with assets over \$50 billion whose business is the provision of financial services and products. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 1(1).

108. See discussion in part III.A.

109. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(4).

110. *Ibid.*, section 3(1).

111. As Chapter 14 allows ex-post damages suits, the Fed must be confident that it has sufficient evidence to later defend both certifications in court, if necessary. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(4).

112. *Ibid.*

Chapter 14;¹¹³ and (b) whether New Lehman will be solvent after the Chapter 14 process is completed. Such an assessment of the Lehman facts indicates that, by the last Friday Lehman operated, September 12, it probably would have been too late to initiate a Chapter 14 filing because Lehman was already devoid of liquidity. As discussed in part II, Lehman had \$3 billion more in debts due on Monday, September 15, than it had cash available¹¹⁴ and expected to be short billions of dollars of cash each day of the coming week.¹¹⁵ Rather, Lehman had enough liquidity to file only through Sunday, September 7. At that point, Lehman still had \$34 billion of cash in its parent liquidity pool,¹¹⁶ CDS spreads were around 300,¹¹⁷ repo capacity had scarcely changed over the past week,¹¹⁸ and commercial paper was continuing

113. In some cases, a liquidity-poor institution may be able to expect substantial private-sector financing following the Chapter 14 process, either independently or using Chapter 14's debtor-in-possession provisions. Lehman's facts indicate it would have had substantial trouble accessing private financing immediately. During Lehman weekend, assembled banks offered \$20 billion of equity financing to facilitate Barclays' acquisition, but on the condition that Barclays guarantee Lehman's trading liabilities, which UK regulators barred Barclays from doing. See Valukas Report, 1528–29. In the counterfactual world, New Lehman would not have such a guarantee. This does not rule out the possibility of Lehman securing financing through debtor-in-possession funding, but to be conservative I assume here that Lehman and the Fed expect it to need to rely on existing liquidity for at least some time.

114. See discussion in part II.B.

115. Author's calculations based on Lehman, "9/13/08 Liquidity Summary," 3; Robert Azerad, "E-mail to Ian Lowitt, et al.," Bates Stamp LBEX-DOCID 717430, September 13, 2008; Lehman, "10/7/08 Liquidity," 99. Analysis of Lehman's liquidity projections also reveals that even if Lehman had deferred payments on maturing long-term debt and foregone buybacks and even if the Fed had accepted all repo unwound by the street, stepped into J. P. Morgan's shoes as clearing bank, and returned \$7 billion of collateral—even then, Lehman would not have made it through Tuesday. *Ibid.*

116. Lehman, "9/13/08 Liquidity Summary," 25.

117. Lehman, "10/7/08 Liquidity," 92.

118. *Ibid.*, 93.

to roll over.¹¹⁹ Most importantly, this is the last date before which the market perceived Lehman to be insolvent.¹²⁰

The second adequate-assurance inquiry is relatively straightforward to meet through September 7 because Lehman held \$96 billion of capital-structure debt, far more than any estimate of the extent of its insolvency. Some, including both Fed staffers and Barclays, thought Lehman was solvent on September 15.¹²¹ Others, including Fed management, thought Lehman was insolvent, but by far less than \$96 billion. For instance, Bank of America had identified about \$65 billion of real estate assets that it was unwilling to acquire without loss protection, which the FDIC later estimated might have incurred losses of \$40 billion,¹²² leaving Lehman insolvent by about \$12 billion.¹²³

While the two prongs of the adequate-assurance standard demarcate the latest possible filing, the earliest depends upon when the Fed can certify that Chapter 14 is necessary to avoid serious adverse effects on US financial stability. At the latest, the Fed can argue that Chapter 14 is necessary once markets will imminently perceive Lehman to be insolvent. Referring again to figure 7.5, the first date at which the markets adjudge Lehman to be insolvent is July 14. This dip would have justified certifying adverse effects on any of eight weekends between July 19–20 and September 6–7. Less conservatively, the Fed might have relied on traditional banking safety-and-soundness regulation, which deems a 2 percent capital ratio to be critically undercapitalized.¹²⁴ From a market-solvency standpoint, Lehman was consistently

119. Lehman, “9/13/08 Liquidity Summary,” 1.

120. See figure 7.5.

121. James B. Stewart and Peter Eavis, “Revisiting the Lehman Brothers Bailout That Never Was,” *New York Times*, September 29, 2014; FDIC (Federal Deposit Insurance Corporation), “The Orderly Liquidation of Lehman Brothers Holdings, Inc. Under the Dodd-Frank Act,” *FDIC Quarterly* 5, no. 2: 1, 14 (noting that Barclays found only \$20 billion of problematic assets, less than Lehman’s book equity).

122. FDIC, “Orderly Liquidation of Lehman,” 2.

123. Lehman had \$28 billion of book equity at this point. See table 7.1.

124. See discussion in part II.A.

critically undercapitalized from June onward,¹²⁵ offering the Fed a possible additional five weekends earlier in the summer during which it could have filed.

Ideally, Chapter 14 cases will be filed early, particularly in fragile market environments. Though filing earlier than necessary risks imposing additional losses upon capital-structure-debt holders relative to no filing, it also minimizes their losses relative to later filings. Moreover, if Chapter 14 is used early enough to allow equity to absorb all losses, then it can be used to issue preferred shares or restructured debt instruments to capital-structure-debt holders with terms equal to those of the original debt instruments. This could make capital-structure-debt holders whole, imposing only *de minimis* losses while also staving off systemic risk concerns.

Realistically, though, regulators will resist triggering Chapter 14 until its use appears critical. I therefore assume that the counterfactual filing occurs on Friday, September 5, the last Friday before Lehman's liquidity fell critically low. By this point, in addition to the strong indications of insolvency, regulators could have demanded Lehman's Q3 results, which would have clearly shown that markets would imminently be convinced of insolvency.¹²⁶

C. Filing Lehman's Chapter 14 Case

In the counterfactual world described above, on or before the evening of Friday, September 5, the Fed informs Lehman's directors that Holdings can file for Chapter 14 or else the Fed will file on Holdings' behalf. Though the Fed's ability to file is critical to ensuring a sufficiently early filing, who files is procedurally immaterial as any filing immediately begins the case.¹²⁷ Crucially, only Holdings enters bankruptcy,¹²⁸ all subsidiaries continue operating as usual and the Estate consists only of

125. Figure 7.5.

126. See part II.B.

127. See Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(4). By contrast, in an involuntary Chapter 11 case, there is first a period in which the debtor may dispute the filing.

128. *Ibid.*, section 3.

Holdings' own balance sheet. Figure 7.7 illustrates Holdings' balance sheet and how it is connected to subsidiary funding, though note that figures therein (all USD billions) are mostly from September 14, the closest-dated to September 5 data available.

The Chapter 14 filing operates as an expanded automatic stay with four facets. In addition to the typical features of a Section 362 stay,¹²⁹ Chapter 14 also stays all US-law creditors of all Lehman entities (including non-filing subsidiaries such as the New York broker-dealer LBI and the main US derivatives subsidiary LBSF) from terminating, accelerating, or modifying any contract.¹³⁰ Second, it stays all contractual rights and obligations contingent upon a Chapter 14 filing.¹³¹ Third, it overrides safe-harbor provisions to stay qualified financial contract counterparties' termination rights for up to forty-eight hours.¹³² Finally, it permanently stays the rights of subsidiaries' creditors and counterparties to terminate contracts due to a change in control.¹³³ The second and third of these stay provisions require qualified financial contract counterparties of all Lehman companies to continue to perform payment and delivery obligations under US contracts. Therefore, even though Lehman's subsidiaries are not in bankruptcy, the stay prevents their counterparties to around \$55 billion of US-law term repo agreements¹³⁴ and around \$25 billion of US-law derivatives¹³⁵ from terminating on the basis of Holdings' filing, though it does allow maturing repurchase agreements to expire in due course.

129. 11 USC, section 362.

130. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(9).

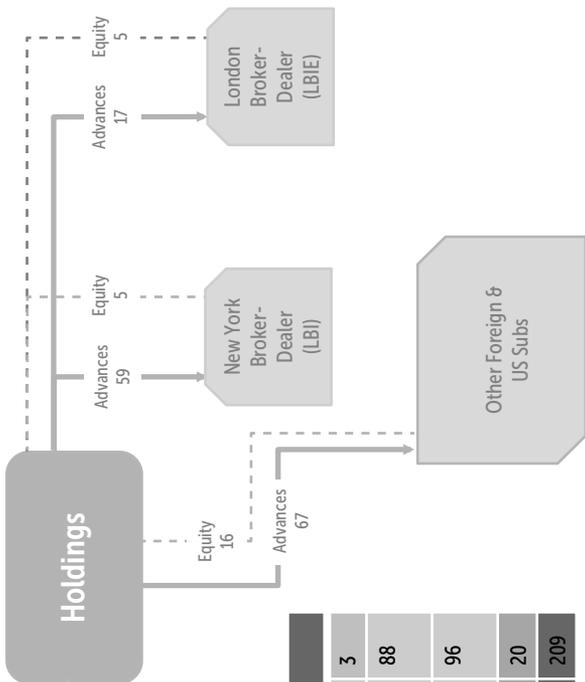
131. *Ibid.*, section 2(7).

132. *Ibid.*, section 2(8).

133. *Ibid.*, section 2(9).

134. Lehman, "9/13/08 Liquidity Summary," 7–8. The figure comes from adding traditional repo in use (\$90.4) and nontraditional shells booked (\$93.2), subtracting all overnight and open repo in use (\$82.1), then multiplying by the proportion of repo that was US-based (.54). Also see statement by Harvey Miller, Federal Reserve Resolution Conference, October 18, 2013.

135. Author's calculations from Disclosure Statement for First Amended Plan, Exhibit 11, April 14, 2010. Full derivation on file with author.



Short-Term-Debt Lenders: 3
 Long-Term-Debt Lenders: 81
 Subordinated-Debt Lenders: 15
 Shareholders (Book): 20

Holdings' Balance Sheet

| Assets | Liabilities and Equity |
|---------------------------|------------------------|
| Cash | Short-term debt |
| 10 | 3 |
| Financial instrs. & other | Loans from subs |
| 26 | 88 |
| Advances to subs | Capital-structure debt |
| 145 | 96 |
| Equity in subs | Equity |
| 26 | 20 |
| TOTAL | TOTAL |
| | 209 |

Figure 7.7. Only Holdings Files

Source: Based on data from "Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors' Disclosure Statement for Joint Chapter 11 Plan," exhibits 9-4, 9-5, 9-6 (Apr. 14, 2010); Lehman Brothers, exhibit 2.1.10: "List of the Registrant's Subsidiaries," in Lehman, 2007 10-K (disclosing ownership structure of various intermediate holding companies); and table 7.1.

Naturally, Lehman's many European-law contracts are outside this stay's jurisdiction. Nothing in Chapter 14 prevents counterparties to around \$45 billion of UK-law term repo agreements¹³⁶ and \$17 billion of derivatives¹³⁷ from terminating their contracts. Nothing in Chapter 14 prevents foreign regulators from ring-fencing assets in their jurisdictions, nor does it prevent them from placing into administration subsidiaries domiciled in their jurisdictions.

Fortunately, few master repo agreements contain the same types of cross-default provisions as master derivatives agreements, and the ISDA Resolution Stay Protocol and BRRD article 60a go a long way in addressing the latter problem. Under the ISDA Protocol, any derivatives master agreement between Lehman and another Protocol party disallows cross-default and early termination rights on the basis of the Chapter 14 filing alone. Article 60a imposes a similar stay that likewise prevents counterparties from exercising termination rights.¹³⁸ Therefore, counterparties to the very large majority of contracts held by subsidiaries are stayed from accelerating or terminating their obligations. For the purposes of the counterfactual, I assume foreign regulators cooperate in the administration of Chapter 14, but I return to this issue in part IV.

D. Moving for a Section 1405 Transfer

On Friday evening, ideally at least forty-eight hours before Asian markets reopen on Monday, the Fed moves for a section 1405 transfer. This is the specific legal mechanism by which the Fed will move all assets and liabilities except for capital-structure debt to the bridge holding company, New Holdings. Concurrently, the Fed provides electronic notice that Holdings has filed for Chapter 14 and that a hearing will be held in twenty-four hours on its motion.¹³⁹ Figure 7.8 depicts a chronology for the weekend.

136. See note 134 (same sum times proportion of nontraditional UK-based (.44)).

137. Author's calculations from "Disclosure Statement for First Amended Plan Exhibit 11," April 14, 2010. Full derivation on file with author.

138. BRRD, Article 60a, sections 1–2.

139. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(6).

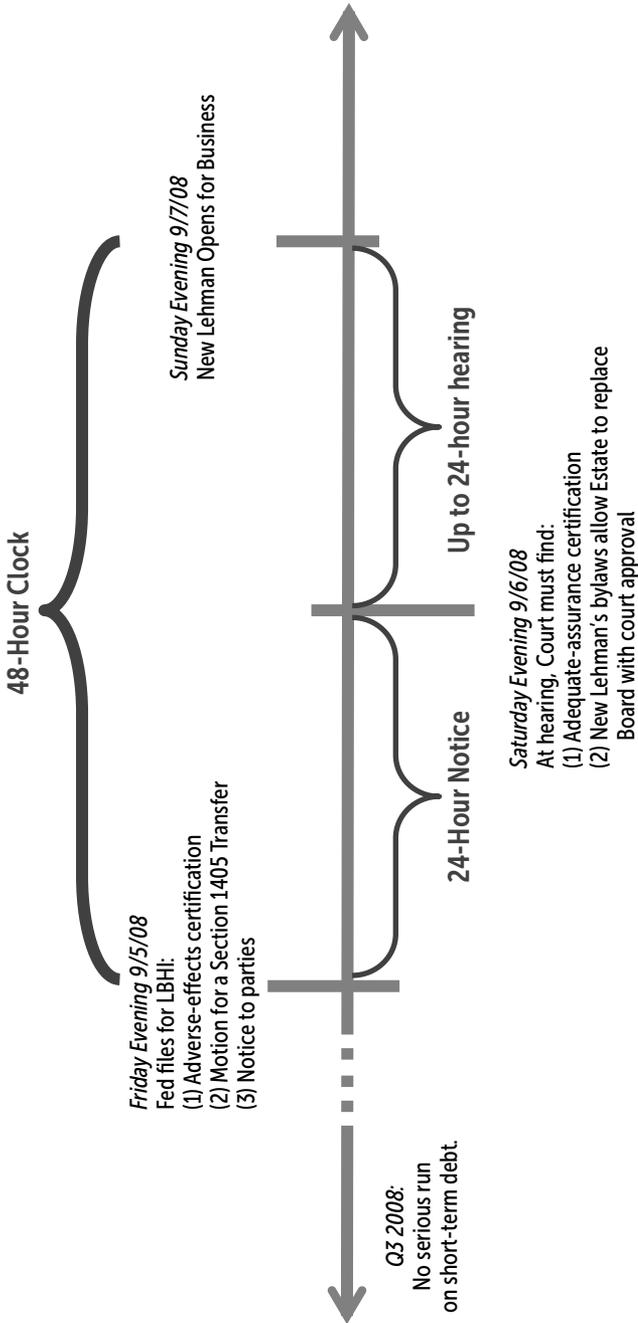


Figure 7.8. Counterfactual Timeline of Chapter 14 Section 1405 Transfer

Chapter 14 requires the Fed to notify Holdings' twenty largest unsecured creditors,¹⁴⁰ the FDIC, and the primary regulators of each subsidiary whose equity may be transferred.¹⁴¹ Holdings directly owns thirty-five material subsidiaries¹⁴² which have eight primary regulators: the Fed, Securities and Exchange Commission, Commodity Futures Trading Commission, Commission Bancaire in France, Monetary Authority of Singapore, Australian Securities and Investments Commission, Commission de Surveillance du Secteur Financier, and German Federal Supervisory Authority for the Financial Services Industry.¹⁴³ As all other Lehman affiliates are owned by Holdings' subsidiaries, the Fed is not required to notify their regulators. Nonetheless, the Fed most likely provides courtesy notice to regulators of large indirect subsidiaries including the Office of the Comptroller of the Currency and Office of Thrift Supervision (still in existence back in 2008) in the United States, the Financial Services Authority in the United Kingdom, Swiss Federal Banking Commission, and Financial Services Agency in Japan.¹⁴⁴

The transfer itself will allow New Holdings to step into Holdings' shoes. Specifically, the Estate will transfer to New Holdings all cash, financial instruments, advances to and equity in subsidiaries, and other miscellaneous assets.¹⁴⁵ These include a few qualified financial contracts and assets subject to secured creditors' liens, all of which can

140. Some of these were affiliates. See table 7.1 (showing that 47 percent of Holdings liabilities were owed to affiliates); Lehman, "First Disclosure" (Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors' Disclosure Statement for Joint Chapter 11 Plan), Exhibit 9-5, April 14, 2010 (showing Holdings owed \$33 billion to LB Treasury alone). Others may have been Lehman's largest third-party bondholders (owed another 42 percent of Holdings' liabilities, table 7.1), nearly all of whom were foreign. Lehman Brothers Holdings, Inc., "Chapter 11 Petition," September 15, 2008, 7–12.

141. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(6).

142. Lehman, "List of Subsidiaries" (accounting as of November 30, 2007).

143. See Lehman Brothers Holdings, Inc., "Annual Report for 2007" (Form 10-K), 10–12.

144. *Ibid.* (discussing these regulators' roles in overseeing Lehman).

145. See table 7.1.

be transferred under the Chapter 14 provisions.¹⁴⁶ As consideration, New Holdings will issue to the Estate a 100 percent equity stake and will assume all of Holdings' liabilities except for its capital-structure debt. These liabilities include debt agreements with subsidiaries, structured debt agreements with third parties, qualified financial contract liabilities, and guarantees of subsidiaries and subsidiaries' contracts.¹⁴⁷ All transferred debts will be non-recourse.¹⁴⁸ In sum, the *only* assets and liabilities on Holdings' balance sheet that will not be transferred are capital-structure debt instruments. Figure 7.9 illustrates.

If approved, this transfer will cause New Lehman—the consolidated company led by New Holdings—to have a consolidated capital ratio of 19 percent.¹⁴⁹ As shown, Holdings' former shareholders and long-term-debt holders will continue to own claims on Holdings' Estate. Holdings' Estate will, in turn, own all equity in New Holdings. Other claimants will hold debt contracts on which New Holdings will be obliged to perform. New Holdings will own all thirty-five subsidiaries formerly owned by Holdings, it will guarantee those subsidiaries that were guaranteed by Holdings, and it will support subsidiary contracts that were guaranteed or otherwise supported by Holdings.

Additional elements of the transfer motion will clarify details regarding licenses for New Holdings, the structure of the relationship between the Estate and the directors of New Holdings, and initial management of New Holdings. One provision of Chapter 14 allows for the transfer of all licenses, permits, and registrations from Holdings

146. Notwithstanding the Bankruptcy Code's safe harbor, Chapter 14 allows the court to override anti-transfer provisions in QFC contracts in order to effectuate such a transfer. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(8).

147. In the few cases where a non-qualified-financial-contract creditor is under-secured, that creditor's claim will be bifurcated. Jackson, "Building on Bankruptcy: Revised Chapter 14." The collateral and security interest will be transferred non-recourse and the deficiency claim will remain with the Estate as a general unsecured claim.

148. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(3).

149. \$116 billion book equity at New Holdings divided by \$598 consolidated assets, table 7.1, gives a capital ratio of 19 percent.

Capital-Structure Debt Claims: 96
Shareholder Claims: 20

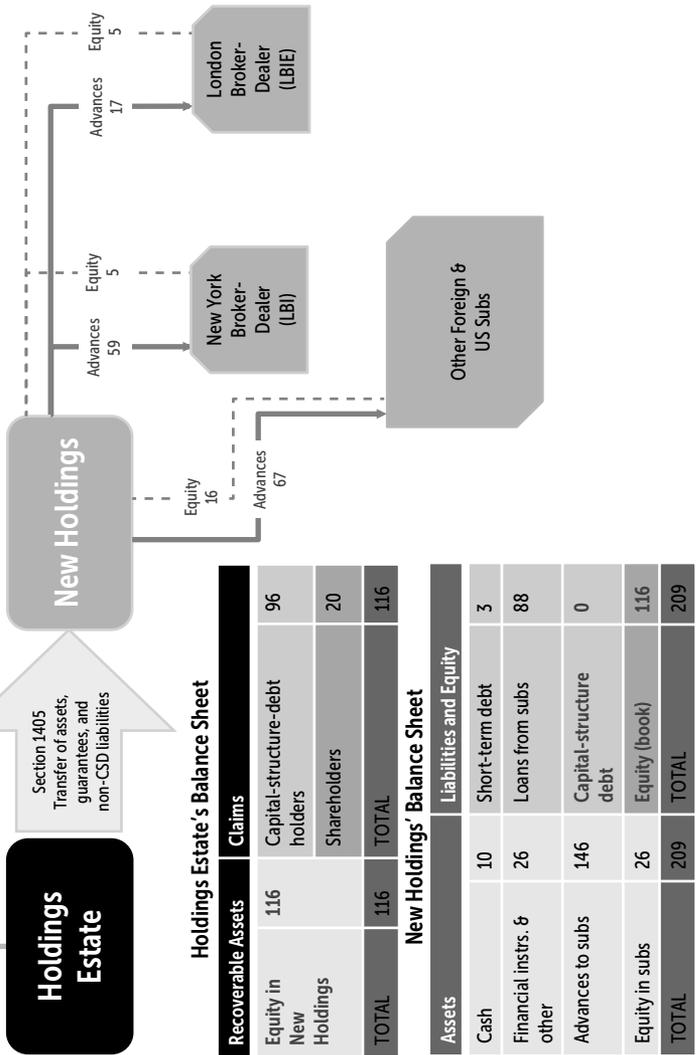


Figure 7.9. Structure of the Section 1405 Transfer

Source: Based on data from “Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors’ Disclosure Statement for Joint Chapter 11 Plan,” exhibits 9-4, 9-5, 9-6 (Apr. 14, 2010); Lehman Brothers, exhibit 21.10: “List of the Registrant’s Subsidiaries,” in Lehman, 2007 10-K (disclosing ownership structure of various intermediate holding companies); and table 7.1.

to New Holdings.¹⁵⁰ Another requires that a trustee be selected from a pre-approved list to represent the Estate before the Chapter 14 judge, together with other committees representing parties in interest.¹⁵¹ Within thirty days after the transfer, this trustee, together with the creditors' and shareholders' committees, will have an opportunity to replace the board of New Holdings.¹⁵² No provisions, however, specifically constrain the Fed's discretion in determining whom among Lehman's managers and directors to propose to retain in order to maximize value for the estate, and whom to propose to let go. To help retention, the Fed also proposes a key employee retention policy upfront, as is typical for many bankruptcy filings.

Twenty-four hours after the Fed moves for the section 1405 transfer, the court holds a hearing to give shareholders, creditors, counterparties, and regulators opportunities to object. Chapter 14 allows the court only twenty-four additional hours in which to complete this hearing, for forty-eight hours total between filing and sale consummation. This tight time frame is not without precedent. In Lehman's actual bankruptcy case, Judge James Peck—taking into account the urgency and sensitivity of the situation—approved LBI's sale to Barclays in only twenty-four hours.¹⁵³

Unlike Lehman's actual case, however, in a Chapter 14 case, the ex ante development and use of living wills focused on a Chapter 14 proceeding will enormously reduce the pressure involved in the short time frame.¹⁵⁴ Moreover, Chapter 14 is structured to mitigate the burden of the twenty-four-hour time frame. The Chapter 14 judge is a member of a preselected panel with financial services expertise who can also rely upon preselected special masters with additional expertise.¹⁵⁵ Most importantly, there is little upon which the court must rule. By the end of the hearing, the court needs only:

150. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(10).

151. *Ibid.*, section 2(15).

152. *Ibid.*, section 2(6).

153. Lehman, "First Disclosure," 46.

154. See discussion in part III.A.

155. Thomas Jackson, "Bankruptcy Code Chapter 14: A Proposal," in *Bankruptcy Not Bailout*, 26–27.

1. To find that the Fed does not propose to transfer capital structure debt;
2. To find that New Holdings' bylaws allow for a thirty-day period in which the Estate, after notice and a hearing before the Chapter 14 judge, will choose New Holdings' board of directors; and
3. Either to find itself, or to note that the Fed had certified, that New Holdings will provide adequate assurance of future performance on each liability assumed.

The Fed's proposed transfer is structured to satisfy the first and second of these provisions by design. Consequently, the *only* provision at issue is the third. In the counterfactual, the Fed files early enough to make this certification itself. Therefore, the primary challenge the Chapter 14 judge faces is ensuring parties at interest receive an opportunity to be heard in the course of the twenty-four-hour hearing.

There may be few objections to the transfer. If Chapter 14 is credible and filed early, all parties should expect to be at least as well off with it than without it.¹⁵⁶ Nonetheless, creditors or regulators may object to their claims or regulated subsidiaries being transferred without their consent. They may not halt the sale if performance is adequately assured, but they may argue that the certification is unwarranted. Additionally, capital-structure-debt holders may object to the transfer of assets, though it will be challenging for them to show expected harm. It is highly likely that Holdings' assets—83 percent of which are equity in or debts due from subsidiaries¹⁵⁷—will return more value if transferred to the bridge company than if retained with the Estate.¹⁵⁸ Furthermore, public policy reasons motivate the transfer; approving it over objections therefore likely satisfies due process under *Matthews v. Eldridge*.¹⁵⁹ If a court later concludes otherwise, the remedy is an ex-post damages action as specified in Chapter 14.¹⁶⁰

156. See part IV.E.

157. Table 7.1.

158. See part IV.E.

159. 424 U.S. 319, 332–35 (1976).

160. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(4).

Other objections may be more likely. Parties can object to New Holdings' proposed management, the New Holdings charter and bylaws, or provisions governing how the Estate will choose new management and directors of New Holdings after an interregnum period. Parties can also move to propose alternative management structures, trustees, procedures, or sale details. Ideally, the living-will process will have been used to address many such issues ahead of time.

So long as the court makes the findings above within twenty-four hours, a version of the sale outlined here, an interim management team and structure for New Holdings, a charter and bylaws, a list of trustees for the Holdings Estate, and an agreement governing Estate-Holdings relations are approved on Sunday evening, just before Asian markets open.

Part IV: Business after Chapter 14

This part asks two hard questions of the Lehman facts. Given New Lehman's state after Chapter 14, can it finance itself? And, would the social welfare outcomes exceed those of a bailout? With some conditions, it answers each question in the affirmative.

A. Managing the Business and Recapitalizing Subsidiaries

In the counterfactual world, New Holdings opens on Sunday evening, September 7, 2008, as a normal holding company neither directly controlled by regulators nor in bankruptcy. It receives no Bankruptcy Code protections nor is it subject to debtor-in-possession requirements, such as court approval for financing or for pursuing non-ordinary-course activities. New Holdings immediately assumes all responsibilities formerly borne by Holdings, particularly its cash-management and treasury roles. Operational systems are unchanged from those at Holdings; they merely have a different legal employer and owner.

The interim Board, CEO, and managers are immediately responsible for making all decisions to maximize value for New Holdings' single shareholder, Holdings' Estate.¹⁶¹ Management has a volumi-

161. By contrast, under SPOE, the FDIC retains discretion to make these decisions. See SPOE Fed. Reg., 76617.

nous list of tasks. It needs to assess and administer Lehman's liquidity and generate strategies to obtain short-term cash, including asset sales and new debt or equity funding. It needs to address runs on the prime-broker business, derivatives novations, and potential runs on Lehman's banks. Though it has an exemption from meeting applicable debt and capital requirements for up to one year,¹⁶² it needs to evaluate long-term restructuring and liquidation options for broad asset classes and business lines and develop a strategy to return to compliance with these regulations. It needs to communicate with regulatory bodies all over the world and thousands of counterparties. And fleeing employees or a ratings downgrade may hamper these efforts.

Yet, financial markets have a track record of absorbing stress and structuring unprecedented workouts when circumstances require. In the past couple of decades, such workouts have minimized losses associated with Bear Stearns in 2008, Long-Term Capital Management in 1998, Salomon Brothers in 1991, and Drexel Burnham in 1989–90, among others. Thus, though these challenges are immense, they are ones with which the private sector is familiar.

At the subsidiary level, several legal events have safeguarded businesses and contractual relationships from resolution. First, Chapter 14, the ISDA Resolution Stay Protocol, and BRRD article 60a together have disallowed subsidiary creditors and counterparties from terminating or altering obligations on the basis of Holdings' filing. The Chapter 14 stay lifts after the section 1405 sale, but, as no subsidiary has defaulted on obligations, counterparties must thereafter continue to perform all pre-sale obligations. By Sunday night, these parties are in the same legal positions as they were Friday afternoon.

Second, Holdings-owned subsidiaries such as New York broker-dealer LBI have experienced a change of control, as their ownership interests are now held by New Holdings. Chapter 14 permanently stays contractual provisions allowing these subsidiaries' creditors or counterparties to terminate on this basis.¹⁶³ Similarly, provisions allowing

162. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(11).

163. See discussion in part III.C.

termination due to a change in the parent's or a subsidiary's credit rating are stayed for ninety days.¹⁶⁴

Third, subsidiaries formerly guaranteed by Holdings, whether in full or with respect to certain contracts, are now guaranteed by New Holdings. In Lehman's actual case, the importance of these guarantees is illustrated by \$94 billion of guarantee claims that subsidiaries filed against the parent.¹⁶⁵ These guarantees were integral to the pre-Chapter 14 debt pricing that creditors and counterparties offered subsidiaries and therefore their re-extension is imperative to ensure continued access to private financing and to reassure clients and foreign regulators.

Fourth, subsidiary contracts that implicated Holdings—such as ISDA Master Agreements listing Holdings as a credit support provider or specified entity—are deemed post-sale to instead implicate New Holdings. Once more, these provisions ensure that no creditor or counterparty with ongoing pre-sale obligations to subsidiaries under US law is able to terminate or alter those obligations on the basis of the Chapter 14 filing and its immediate consequences.

In Lehman's actual case, many of the most challenging legal issues related to foreign subsidiaries, foreign assets, and non-US law contracts. As discussed above, however, the ISDA Protocol and article 60a solve many of the foreign challenges observed. Nevertheless, some creditors and counterparties under non-US-law contracts may retain rights to accelerate or terminate obligations on the basis of the Chapter 14 filing and transfer.¹⁶⁶ Of even greater concern is that foreign regulators could intervene in the Chapter 14 process. Public data do

164. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(7).

165. Author's calculations from Lehman, "First Disclosure," exhibit 4.

166. For example, Article 60a does not address change-of-control provisions. This might mean that counterparties to non-US-law contracts held by Holdings' thirty-five subsidiaries could accelerate or terminate their obligations on the basis of the transfer. This is most likely to be a problem for Holdings' ten foreign-domiciled direct subsidiaries, including its French and German banks. See Lehman, "List of Subsidiaries," 10–12. Other contracts might additionally contain provisions stating that, on the basis of this acceleration or termination, they too may accelerate or terminate.

not fully clarify the extent to which foreign contractual issues would have hindered New Lehman's ability to continue business,¹⁶⁷ and it is impossible to know how foreign regulators would have reacted and how costly their interventions might have been. For the purposes of the counterfactual, I must assume that the Fed and Lehman, through the living-will process, know ahead of time that these costs will be small enough not to threaten New Lehman's solvency. In subparts IV.B and IV.D below, however, I assume New Lehman may need to manage what I generically call "international friction" costs of \$10 billion.

Even though subsidiaries have mostly been safeguarded from Chapter 14's effects, New Holdings may want to take steps to reassure funders, counterparties, and regulators of subsidiaries' sound footing. As illustrated in figure 7.10, New Holdings can recapitalize subsidiaries by altering its internal intra-company ledgers to convert debt owed by subsidiaries to New Holdings into equity New Holdings owns in subsidiaries. This increases key Lehman entities' capital ratios, reducing the likelihood of regulatory intervention and increasing the expected payout to creditors should New Holdings' management determine that some subsidiaries should enter their own resolution proceedings.

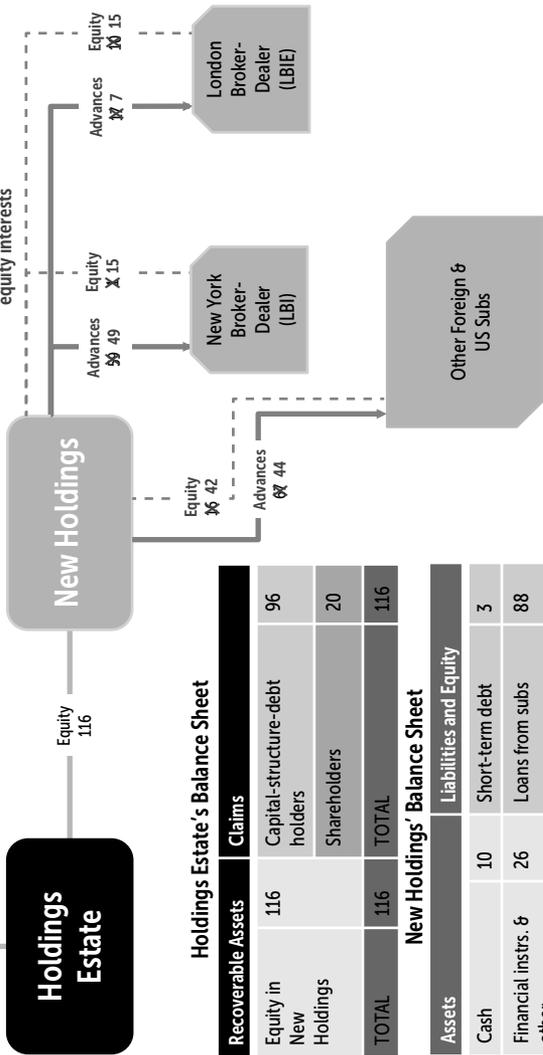
B. Lehman's Solvency and Financing after Recapitalization

The two factors most determinative of New Lehman's success—and Chapter 14's ability to prevent systemic costs—are its ability to obtain financing and the extent to which the marketplace is confident about its solvency. If New Lehman fails in either dimension and therefore experiences and is unable to weather a severe post-Chapter 14 run, the run could cascade and affect other firms, just as knock-on effects followed Lehman's Chapter 11 filing.¹⁶⁸ And unless policymakers believe a run is avoidable, they will forgo Chapter 14 entirely.

167. Because micro data on individual contracts have not been disclosed, it is impossible to know with precision what proportion of which subsidiaries' obligations were governed by non-US law and, of these, how many and in what amounts included provisions that could have been triggered by a Chapter 14 filing.

168. See part II.C.

Capital-Structure Debt Claims: 96
Shareholder Claims: 20



Holdings Estate's Balance Sheet

| Recoverable Assets | Claims |
|------------------------|--------------------------------|
| Equity in New Holdings | Capital-structure-debt holders |
| 116 | 96 |
| | Shareholders |
| | 20 |
| TOTAL | TOTAL |
| 116 | 116 |

New Holdings' Balance Sheet

| Assets | Liabilities and Equity |
|---------------------------|------------------------|
| Cash | Short-term debt |
| 10 | 3 |
| Financial instrs. & other | Loans from subs |
| 26 | 88 |
| Advances to subs | Capital-structure debt |
| 100 | 0 |
| Equity in subs | Equity (book) |
| 72 | 116 |
| TOTAL | TOTAL |
| 209 | 209 |

Figure 7.10. Recapitalizing Subsidiaries after Sale Approval

Source: Based on data from "Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors' Disclosure Statement for Joint Chapter 11 Plan," exhibits 9-4, 9-5, 9-6 (Apr. 14, 2010); Lehman Brothers, exhibit 21.10: "List of the Registrant's Subsidiaries," in Lehman, 2007 10-K (disclosing ownership structure of various intermediate holding companies); and table 7.1.

After Chapter 14, New Lehman has a 19 percent consolidated capital ratio, three to four times that of comparable institutions.¹⁶⁹ On a book basis it has \$116 billion of equity supporting only \$78 billion of questionable real estate–related assets.¹⁷⁰ As indicated in figure 7.5, though markets were concerned about the value of these assets, they did not perceive them to be worthless. Rather, until September 8, markets discounted the value of Lehman’s assets by almost exactly their book-equity value. Even in Lehman’s final days, market-implied losses relative to book peaked at \$54 billion.¹⁷¹ Assume that, in addition to this \$54 billion figure, New Lehman faces liabilities related to international frictions of \$10 billion and financing costs of another \$10 billion. In total, this places losses at \$74 billion, \$42 billion less than New Lehman’s book equity. Lenders who believe figures in this general ballpark have no incentive to run on the basis of insolvency. Figure 7.11 illustrates the impact that asset devaluations and increases to liabilities would have on New Lehman, showing that, even after devaluations of a magnitude never before seen, New Lehman remains solvent.

Nonetheless, creditors and counterparties might run for other reasons. In particular, New Lehman could experience a shock that might cause existing lenders to increase asset encumbrances or the market could—either independently or because of Chapter 14—become severely illiquid. Chapter 14 helps ameliorate run risks in these cases, but will be less successful than in the insolvency case.

A careful analysis of Lehman’s liquidity position and liquidity risks as of September 5 (the Friday before the counterfactual filing) indicates that New Lehman is able to withstand a moderate liquidity crisis.¹⁷² To

169. See part III.D.

170. Lehman, “9/11/08 Funding Slides,” 82.

171. Book equity of \$20 billion plus approximately \$34 billion negative solvency equity. See figure 7.5.

172. Lehman had experience doing so by late 2008. Over the week beginning March 17, 2008, after Bear Stearns was sold to J. P. Morgan, Lehman lost \$7 billion of repo funding, \$4 billion of prime brokerage accounts, and \$3 billion of commercial paper and had to handle \$1 billion of derivatives novations. Relying on its ability to pledge affiliate collateral to the European Central Bank, the broker-dealers’

(A) New Lehman Consolidated Balance Sheet

| | |
|-------------------|--|
| Book Asset Values | Other liabilities |
| | Book equity that was previously long-term debt |
| | Book equity before Chapter 14 |

(B) New Lehman Consolidated Balance Sheet Revaluation

| | |
|--|--|
| Book Asset Values | Other liabilities |
| Additional devaluations over Lehman's final days | New liabilities |
| Pre-insolvency devaluations | Book equity that was previously long-term debt |
| | Book equity before Chapter 14 |

(C) New Lehman Resultant Balance Sheet

| | |
|------------------|-------------------|
| New Asset Values | Total liabilities |
| | New equity |

Figure 7.11. Post–Chapter 14 Asset Devaluations Short of Insolvency

test this proposition, I developed a three-week stress test using data available in Lehman's discovery documents that mimics the run Lehman actually experienced the week of September 8–12 (the first week after the counterfactual filing) and Lehman's own projected outflows for the weeks of September 15–26 (the second and third weeks after the counterfactual filing).¹⁷³

I derived estimates for outflows related to unsecured funding maturities, operating cash flows, and other contractual commitments and liabilities using data on what Lehman experienced in fact between September 8 and September 12, which is likely more severe than what New Lehman can be expected to face. With regards to secured funding, I was less conservative and assumed New Lehman can renew all of Lehman's maturing repo funding, but can do so only at the lower of haircuts that were either (a) charged by LBI counterparties during the week of September 8–12 or (b) charged by the Fed while LBI used the PDCF the week of September 15–19.

Table 7.2 displays the results. As shown, under these assumptions, New Lehman can weather a moderate three-week liquidity crisis and still have \$18 billion of liquidity remaining at the end of September. If New Lehman additionally pays \$10 billion to manage international frictions, the figure falls to \$8 billion, but remains positive.

Only a driver other than insolvency, such as market-wide illiquidity, would cause a substantial run on New Lehman such as that reflected

trapped liquidity pools, cushions built into the structure of the repo book, and the newly available PDCF, Lehman weathered this event. Lehman, "5/15/08 Liquidity," 25. But success in the face of a liquidity crisis is far from assured. In May and June 2008, the Fed determined that, under certain assumptions, Lehman would have been short of liquidity if 35 percent of repo funding failed to turn over, 35 percent of prime broker clients pulled out, derivative margin requirements increased 35 percent, and 35 percent of derivatives counterparties experienced delays meeting payment obligations. Federal Reserve Bank of New York, "Primary Dealer Monitoring: Initial Assessment of CSEs," Bates Stamp FRBNY to Exam 000017-36, May 12, 2008.

173. If anything, these outflow estimates may be less conservative than the mean, as these were the figures that Lehman used to try to convince regulators to provide financing over Lehman weekend. See Azerad, "E-mail."

in table 7.2. As noted in the assumptions, New Lehman will need central bank assistance to fund some of the \$109 billion of repo loans that were maturing in early September.¹⁷⁴ But market-wide illiquidity will also justify the Fed opening a facility to accept all dealer-bank collateral generally acceptable to tri-party lenders at higher haircuts, as the Fed's Primary Dealer Credit Facility (PDCF) did after September 15, 2008.¹⁷⁵ Figure 7.12 illustrates the peak and average amounts borrowed by a selection of Lehman peers between 2008 and 2010 as well as the number of days that each firm borrowed from the Fed. Given the amount of lending the Fed provided then, it is not hard to imagine a firm like New Lehman relying for some time on considerable central-bank support.¹⁷⁶

On balance, the scenario explored in table 7.2 is near the center of a wide distribution of possible outcomes. If markets remain liquid, then it may too conservatively rule out additional unsecured financing. Even with \$74 billion of losses,¹⁷⁷ New Lehman would remain well capitalized relative to its peers, with an 8 percent capital ratio.¹⁷⁸ This might well allow it to issue bonds or secure new lines of bank funding at high interest rates. On the other hand, if New Lehman experiences a run of greater magnitude than described in table 7.2 or if it uniquely faces challenging market conditions too narrowly tailored to justify a PDCF-type facility, then policymakers may be forced to turn to Title II in order to access the OLF.

174. Lehman, "9/11/08 Liquidity," 43–52.

175. A PDCF-type facility would be allowed by the new Dodd-Frank amended section 13(3). See Darrell Duffie, "Replumbing Our Financial System: Uneven Progress," presentation at conference of the Board of Governors of the Federal Reserve System, "Central Banking: Before, During, and After the Crisis," March 23–24, 2012, Washington DC; Brian D. Christiansen, "Federal Reserve Emergency Credit," *Skadden Commentary on the Dodd-Frank Act*, July 9, 2010, <http://www.skadden.com/insights/federal-reserve-emergency-credit>.

176. See also Skeel, "Financing SIFIs," arguing that the Federal Reserve Act should be amended to allow firms like New Lehman to access the discount window even outside of a program with broad-based eligibility. Such a reform would most likely have assured New Lehman's stability given the figures presented here.

177. See beginning of part IV.B.

178. (116-74)/(598-74).

Table 7.2. Post–Chapter 14 Hypothetical Liquidity Stress Test 9/8–9/26

| Liquidity Available | Assumptions | USD Bil |
|----------------------------|--|------------------|
| TOTAL | | 50 |
| Parent liquidity pool | As stated on 9/5 less assets pledged as intraday collateral | 34 |
| Broker-dealers' liquidity | As stated on 9/8 | 1 |
| Affiliate bank sources | As estimated in Fed stress tests | 4 |
| Committed bank facilities | As reported on 9/15 | 5 |
| Asset sales | As estimated in Fed stress tests | 6 |
| Liquidity Loss Categories | Assumptions | Resultant Losses |
| Secured Funding | | |
| Week of 9/8–9/12 | Re-funds collateral for which Lehman in fact lost funding—either on the street or through a central bank—but only at haircuts that were charged by the street in Lehman's final week or by the PDCF after 9/15; clearing banks do not make collateral calls. | (4) |
| Week of 9/15–9/26 | Renews all maturing repo—either on the street or through a central bank—but only at haircuts actually charged by the street in Lehman's final week or by the PDCF after 9/15. | (8) |
| Assumed haircut increases: | 2%: Treasuries, Municipal Bonds, G10 Bonds | (1) |
| | 4%: US Agency-Issued Securities | (2) |
| | 6%: Asset-Backed Securities | (0) |
| | 10%: Corporate Bonds and Commercial Paper | (1) |

| | |
|---|------|
| 15% Equities | (1) |
| 20%: International Agency Securities, Agency & Private-Label Collateralized Mortgage Obligations | (3) |
| Unsecured Funding | |
| Commercial paper and short-term debt | (4) |
| Short-term bank loan maturities | (0) |
| 50% fails to roll, as occurred in fact between 9/8 and 9/12 | |
| Draw-downs offset 75% of maturities, as occurred in fact between 9/8 and 9/12 | |
| Deposit outflows | (1) |
| Commitments and other liabilities | (4) |
| No maturing deposits turn over | |
| Must meet 100% of loan and conduit funding plus another \$2 billion of on-boarding commitments, average of what occurred in fact and what was used in Fed stress tests. | |
| Operating cash flows | |
| Prime brokerage | (8) |
| 75% loss of existing cash margins | |
| Non-terminated derivatives | (3) |
| As occurred in fact between 9/8 and 9/12 and as estimated for 9/15–9/26 | |
| Total Liquidity Losses | (32) |
| Liquidity Available—Losses | 18 |

Source: Author's analysis based on data from Lehman Brothers, Liquidity Summary 091309 6pm.xls, Bates Stamp LBEX-DOCID 647325, 1–3; Lehman Brothers, "Liquidity of Lehman Brothers," Bates Stamp LBEX-WGM 787681 (Oct. 7, 2008), 93–99; Lehman Brothers, *Liquidity Update*, Bates Stamp LBEX-WGM 784543 (Sept. 11 2008), 43–52; Federal Reserve Bank of New York, "Primary Dealer Monitoring: Liquidity Stress Analysis," Bates Stamp FRB NY to Exam 000033-37 (June 25, 2008); analysis of 9/8–9/12 funding losses in part II.B.

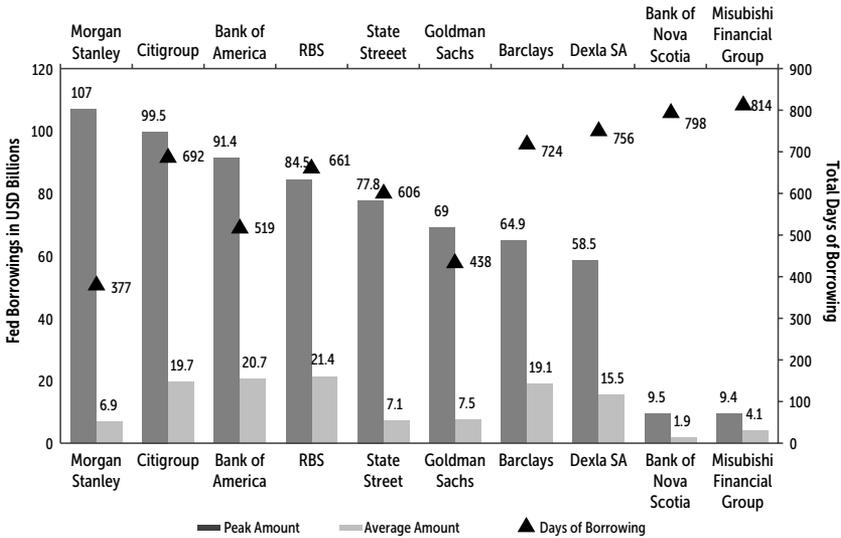


Figure 7.12. G-Reliance on Fed Funding during the Financial Crisis
 Source: Based on data from Bradley Keoun et al., “The Fed’s Secret Liquidity Lifelines,” *Bloomberg*, <http://www.bloomberg.com/data-visualization/federal-reserve-emergency-lending/>.

Assuming New Lehman does successfully manage its liquidity, New Holdings and all Lehman subsidiaries meet all of the firm’s debts as they come due. This results in dramatically different outcomes relative to Lehman’s actual case. Commercial paper lenders such as the Reserve Primary Fund are paid in full at maturity, forestalling the entire chain of events that created a crisis in the commercial paper markets in 2008. Hedge fund clients who found themselves caught up in insolvency proceedings in the actual case are safeguarded. The legal entities that hold their assets have not themselves gone through insolvency proceedings. For those in London, LBIE has not even experienced a change of control. Counterparties to US-law contracts briefly have their contractual rights stayed but are otherwise unaffected. Lehman derivatives affiliates have continued to meet all obligations when due. Any parent-company creditors holding other non-capital-structure debt have been paid at maturity.

Consequently, there is no reason to expect a repeat of the systemic consequences observed as a result of Lehman’s actual 2008

case.¹⁷⁹ There would be no reason for investors to run on money-market funds, no reason for those funds to in turn curtail lending to ordinary corporations, and no reason for depositors to respond to a money-market-fund crisis by pulling out of commercial banks. There would be no reason for hedge funds to flee their prime brokers or for investment banks to turn to the Fed for financing. And, there would be much less reason for legislation to inject hundreds of billions into the banking sector.¹⁸⁰

C. Options for Reorganizing the Business

Assuming New Lehman does successfully manage its liquidity after opening for business, it spends the subsequent months restructuring the business and preparing to raise equity. In 2008, Lehman recognized that its “concentration of positions in commercial real estate–related assets ha[d] become a significant concern for investors and creditors,”¹⁸¹ and had already developed plans to spin off to shareholders \$25–\$30 billion of its \$33 billion in commercial real estate positions when it released its Q3 2008 losses. Though shareholders’ dislike for this plan helped drive Lehman’s crashing stock price the week of September 8,¹⁸² the plan was not inherently a bad one. After Chapter 14, consummating all or part of such a plan is relatively straightforward.

New Lehman’s real estate assets are owned by a wide variety of legal entities. Over a third are held at New Lehman’s banks, New Holdings itself owns another portion, and the New York broker-dealer and its subsidiaries own another.¹⁸³ Assuming the commercial real estate assets that New Holdings does not own directly are held by legal

179. See part II.C.

180. Of course, to whatever extent these outcomes were caused by drivers other than Lehman Brothers, Chapter 14’s use might have left them unaffected.

181. Lehman, 9/10/08 8-K, Ex. 99.1, 3.

182. See, e.g., Lehman, “10/7/08 Liquidity,” 11. (“Lack of immediate actions around asset disposal [in September 9, 2008, earnings release] further dampened market sentiment.”)

183. Author’s calculations from Lehman, “9/11/08 Funding Slides,” 82; Lehman, “First Disclosure,” 49.

entities with sufficient debts to New Holdings,¹⁸⁴ New Holdings can simply “purchase” the relevant assets by forgiving these subsidiaries’ receivables in amounts comparable to its book valuations of the assets in question. Having taken ownership of the assets, Holdings can transfer them to a separate vehicle with equity-only funding.¹⁸⁵ The Estate will then own two assets rather than one: 100 percent of the equity value of New Lehman, stripped of its questionable real estate assets, and 100 percent of the equity value of the spin-off vehicle.

New Lehman can also undertake other actions to partially liquidate and reorganize. For instance, Lehman had plans to sell a majority stake in its Investment Management Division, which remained profitable over the course of 2008.¹⁸⁶ As of August 31, it managed \$273 billion in assets, had experienced no customer withdrawals over the summer, and included Neuberger Beremann, which had a reputation separate from Lehman Brothers.¹⁸⁷ By September 12, multiple parties had already undertaken due diligence and neared agreement on a price for the division.¹⁸⁸ Therefore, New Lehman can sell the division at a decent price and raise cash in the process.

184. Lehman, “First Disclosure,” exhibit 4 offers traction on this issue, but without more granular data it is not possible to know whether the existing advances would have been sufficient.

185. This scheme allows the Estate to “retain upside in the commercial real estate portfolio” while also “leav[ing] the firm with limited commercial real estate exposure.” Lehman, 9/10/08 8-K, Ex. 99.1, 2. The spin-off firm, which Lehman planned to call REI Global, is “appropriately capitalized to hold the [commercial real estate] assets;” “able to account for its assets on a hold-to-maturity basis;” and able, therefore, to “manage the assets without the pressure of mark-to-market volatility.” That is, REI Global can wait out the “current economic cycle” until bids return to the assets’ “intrinsic value.” *Ibid.*, 3.

186. Lehman, Q2 2008 10-Q, 22–23; Lehman, 9/10/08 8-K, Ex. 99.1, 1, 9; see also Valukas Report, 1966–67.

187. Lehman, 9/10/08 8-K, Ex. 99.1, 6.

188. “Debtors’ Motion To (A) Establish Sales Procedures; (B) Approve A Seller Termination Fee And A Reimbursement Amount; And (C) Approve The Sale Of The Purchased Assets And The Assumption And Assignment Of Contracts Relating To The Purchased Assets,” October 6, 2008, 7.

Finally, New Lehman may place subsidiaries into Chapters 7, 11, or 14 (the portion thereof meant for large operating subsidiaries) in the United States, or into relevant administration proceedings abroad, as circumstances warrant. In some cases this might be done in conjunction with proposals above. For instance, it might be easier to sell the Investment Management Division in a Chapter 11 363 sale in order to allow it to go through free and clear of liens and encumbrances. Critically, New Lehman's management and board, not the FDIC, Fed or bankruptcy court, make all of these decisions.

D. Procedures for Terminating the Chapter 14 Case

During its first months of operation, New Lehman looks like a typical financial services company except that Holdings' Estate continues to own it until the Chapter 14 case is terminated. In order to terminate the case, New Lehman's management, in consultation with the Estate, needs to determine that the firm is sufficiently stable so as to allow the marketplace to value its equity. Ideally, this occurs within a few months, though timing depends on market conditions.

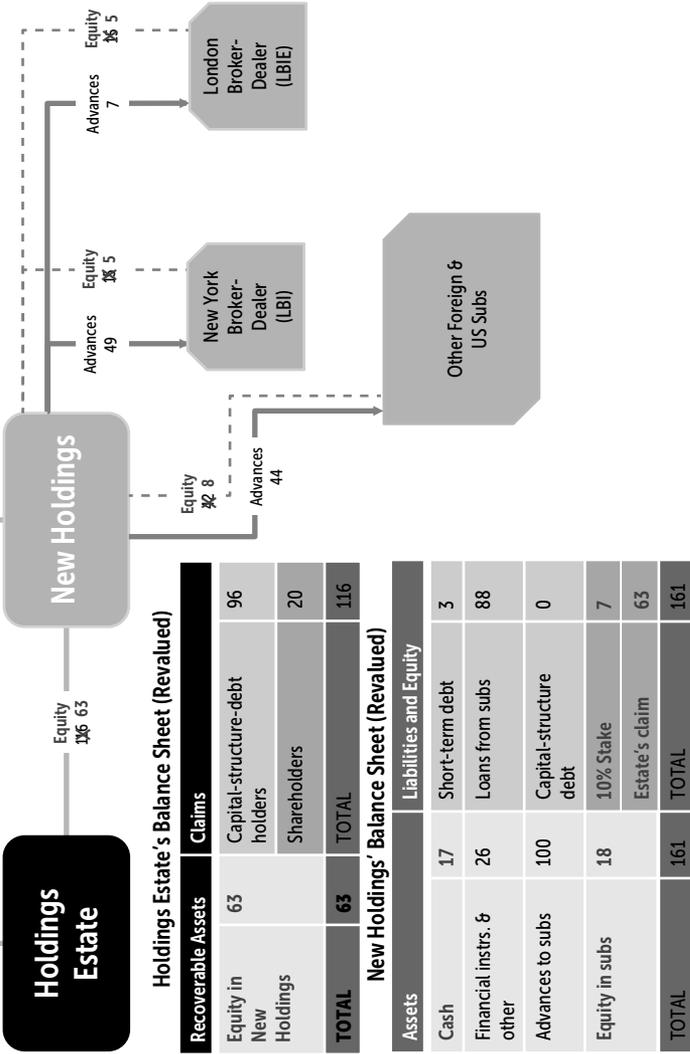
The valuation occurs through an initial public offering of New Lehman stock,¹⁸⁹ which New Holdings undertakes similarly to a debtor in Chapter 11, that is, without complying with many applicable securities laws.¹⁹⁰ Before the Chapter 14 plan is approved, New Lehman first offers a small portion of its equity. As shown in figure 7.13, suppose New Lehman issues 100 million shares comprising a 10 percent stake at \$70 per share and the price remains stable at issuance. This price implies losses of \$46 billion relative to pre-Chapter 14 book values.¹⁹¹ To reflect these losses on the balance sheet, New Holdings also writes down its equity stakes in subsidiaries.

189. By contrast, SPOE would rely on expert valuations of the company. See SPOE, Fed. Reg., 76617.

190. Jackson, "Building on Bankruptcy: Revised Chapter 14," section 2(13).

191. New Holdings' book equity is \$116 billion. See figure 7.9. If a 10 percent stake sells for \$7 billion (100 million shares times \$70 per share), this implies total equity is worth \$70 billion, or \$46 billion less than the \$116 billion book valuation.

Capital-Structure Debt Claims: 96
Shareholder Claims: 20



Holdings Estate's Balance Sheet (Revalued)

| Recoverable Assets | | Claims |
|------------------------|-----------|--------------------------------|
| Equity in New Holdings | 63 | Capital-structure-debt holders |
| | | Shareholders |
| TOTAL | 63 | TOTAL |
| | | 116 |

New Holdings' Balance Sheet (Revalued)

| Assets | Liabilities and Equity |
|---------------------------|------------------------|
| Cash | 17 |
| Financial instrs. & other | 26 |
| Advances to subs | 100 |
| Equity in subs | 18 |
| TOTAL | 161 |
| | Short-term debt |
| | 3 |
| | Loans from subs |
| | 88 |
| | Capital-structure debt |
| | 0 |
| | 10% Stake |
| | 7 |
| | Estate's claim |
| | 63 |
| | TOTAL |
| | 161 |

Figure 7.13. New Lehman's Initial Public Offering

Source: Based on data from "Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors' Disclosure Statement for Joint Chapter 11 Plan," exhibits 9-4, 9-5, 9-6 (Apr. 14, 2010); Lehman Brothers, exhibit 21.10: "List of the Registrant's Subsidiaries," in Lehman, 2007 10-K (disclosing ownership structure of various intermediate holding companies); and table 7.1.

The \$7 billion price for a 10 percent equity stake implies that the remaining 90 percent equity stake owned by the Estate is worth \$63 billion. With this valuation, the Estate can now distribute the value of its single asset to claimants either by selling its equity stake for cash or by simply distributing shares using the Chapter 11 plan process, as shown in figure 7.14.

The Bankruptcy Code's restrictions on plans dictate exactly what occurs.¹⁹² There are three classes of claimants: former general long-term debt holders, former subordinated debt holders, and former shareholders. The value of the single asset is worth less than the aggregate claims of the general long-term-debt holders, who are the most senior claimants. Therefore, absolute priority requires that they receive all of the Estate's value and that former subordinated-debt holders and shareholders receive nothing. Since the Estate's equity stake is worth \$63 billion, general long-term debt holders each receive \$0.78 on the dollar.

E. Outcomes for Social Welfare, Clients, Counterparties, and Creditors

At the close of the Chapter 14 case, it is clear that all parties have done at least as well as in Lehman's Chapter 11 case. Table 7.3 details outcomes in Holdings' actual case, as of early 2014. As shown, Chapter 11 has resulted in Holdings recovering only 22 percent of value relative to book on its assets. Though secured creditors have been paid in full, unsecured creditors have received payouts well under \$0.30 on the dollar, largely because of the huge claims made on guarantees that Holdings extended over subsidiaries. Clients, though largely paid in full, have in some cases been embroiled for years in litigation with the Lehman Estate.

In Chapter 14, by contrast, both clients and counterparties have been entirely unaffected by the Chapter 14 process. Creditors other than holders of capital-structure or subordinated debt do decidedly better than in Lehman's Chapter 11 case: like clients and counterparties, they are essentially unaffected, as New Lehman assumes and

192. By contrast, SPOE would grant the FDIC discretion to prefer some creditors over others of equal rank. See SPOE, Fed. Reg., 76616-18.

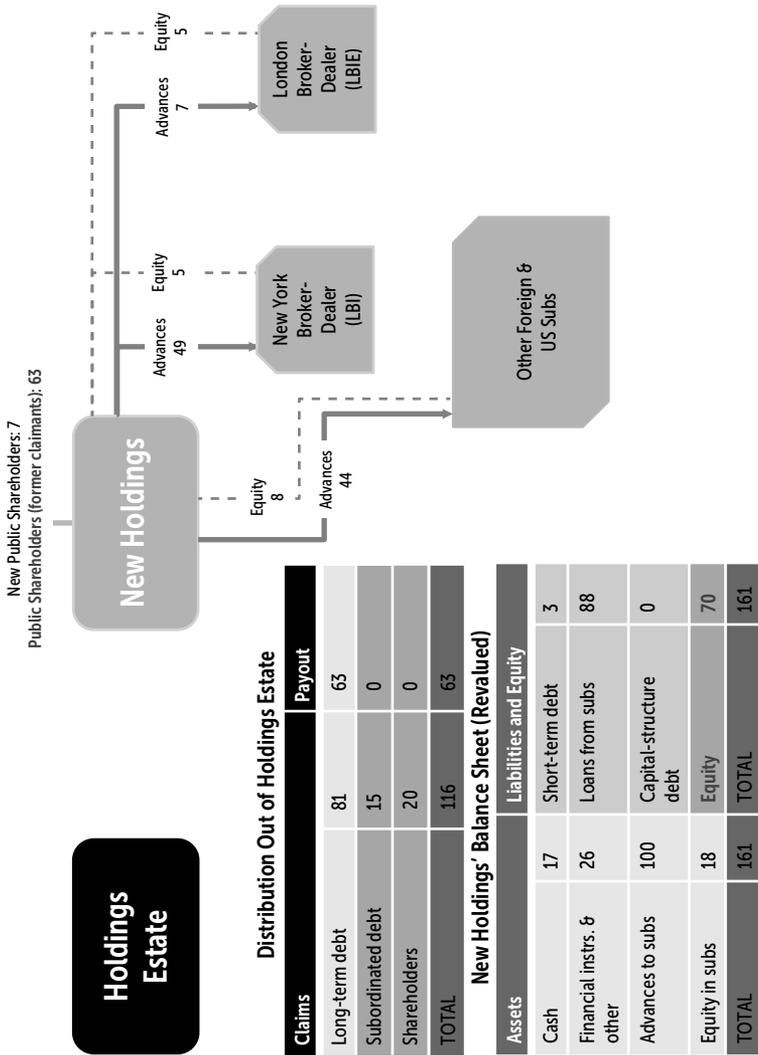


Figure 7.14. Approving a Plan and Paying Claimants

Source: Based on data from “Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Debtors’ Disclosure Statement for Joint Chapter 11 Plan,” exhibits 9-4, 9-5, 9-6 (Apr. 14, 2010); Lehman Brothers, exhibit 21.10: “List of the Registrant’s Subsidiaries,” in Lehman, 2007 10-K (disclosing ownership structure of various intermediate holding companies); and table 7.1.

meets all obligations to them. Shareholders and subordinated debt holders, by contrast, lose everything, at least under the assumptions used here. This, however, is precisely equal to how each group fared in Lehman's Chapter 11 case.

The one group that receives between zero and 100 percent are long-term creditors. In Chapter 11, this group expects to receive payouts of \$0.27 on the dollar. It is highly unlikely that losses would be near as large under Chapter 14. For that to occur, the market needs to value New Lehman's \$116 billion of book equity as worth only \$22 billion, or \$78 billion less than markets thought Lehman's long-term debt and equity was worth in July 2008.¹⁹³ Though markets were skeptical of the value of Lehman's \$78 billion of real estate assets,¹⁹⁴ there is no evidence that they believed they were worth nothing.

A more realistic estimate could be obtained as follows. Suppose embedded balance-sheet losses are as large as markets implicitly estimated on September 15: \$34 billion beyond Lehman's (by that point) \$20 billion of book equity, or \$54 billion total.¹⁹⁵ And, suppose that various financing obligations the firm takes on in its first months to relieve liquidity pressure carry high interest rates that cause another \$10 billion in losses, international frictions cause an additional \$10 billion in losses, and legal and administrative costs come to \$6 billion. Even these assumptions yield total losses to be borne by equity and capital-structure debt of only \$80 billion, \$35 billion of which are borne by shareholders and subordinated debt-holders. Thus, even under this scenario, senior long-term-debt holders receive \$0.55 on the dollar, double their receipts in Lehman's Chapter 11 case.¹⁹⁶

193. In early July, markets valued Lehman's equity at about \$18 billion (author's calculation from share price and shares outstanding, data from Bloomberg), and implicitly valued its long-term debt at 85 percent of par, or \$82 billion, figure 7.3; $\$18 + \$82 - \$22$ gives the figure cited.

194. Lehman, 9/11/08 Funding Slides, 82.

195. See figure 7.5; table 7.1.

196. $\$20 + \$34 + \$10 + \$10 + \$6 = \80 billion. The first \$35 billion of this is borne by shareholders and subordinated-debt holders, see figure 7.14, leaving \$45 billion to be borne by general long-term-debt holders. $\$45/\$80 = \$0.55$ payout.

Table 7.3. Holdings' Balance Sheet, Recoveries, and Claims

| ASSETS & RECOVERIES | (1) Holdings' Assets 9/14/08 in USD Billions | (2) Holdings' Recoveries 2010 in USD Billions | (3) Recoveries as % of Book |
|--|--|--|--|
| Cash, equivalents, and segregated securities | \$10 | \$6 | 61% |
| Financial instruments & inventory positions | 23 | 7 | 28% |
| Liquid assets | 6 | missing | |
| Real estate-related assets | 11 | 4 | 40% |
| Corporate debt, equities, & loans | 6 | 2 | 35% |
| All Other | 179 | 34 | 19% |
| Receivable from subsidiaries | 147 | 26 | 18% |
| Equity in net assets of subsidiaries | 26 | 3 | 10% |
| Receivables from third parties | 2 | 3 | 327% |
| Other assets | 2 | 2 | 123% |
| TOTAL ASSETS | \$209 | \$47 | 22% |
| LIABILITIES, EQUITY, & CLAIMS | (1) Holdings' Liabilities 9/14/08 in USD Billions | (2) Holdings' Allowed Claims 2011 in USD Billions | (3) Payout as % of Claim 2014 |
| Short-term & current long-term debt | \$19 | Included in LT borrowings, general unsecured | |
| Collateralized financing | 0 | 2 | 100% |

| | | | |
|---|------------|-------------------|------------|
| Accrued liabilities and payables | 1 | General unsecured | 25% |
| Owed to subsidiaries | 88 | 65 | 21% |
| Long-term borrowings | 80 | 99 | 23% |
| Senior notes | 65 | 84 | 27% |
| Subordinated notes | 15 | 15 | 0% |
| General unsecured claims | N/A | 11 | 25% |
| Admin, priority & convenience claims | N/A | 6 | 99% |
| Guarantee claims | N/A | 95 | 16% |
| TOTAL LIABILITIES / CLAIMS | 189 | 278 | 22% |
| Preferred equity | 9 | | 0% |
| Common equity | 11 | | 0% |
| TOTAL STOCKHOLDERS' EQUITY | 20 | | 0% |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | 209 | | |

Source: Based on data from In re Lehman Brothers Holdings, Inc. et al., Monthly Operating Report Balance Sheet as of September 14, 2008; Lehman Brothers Holdings, Inc. and its Affiliated Debtors, Debtors' Disclosure Statement for Third Amended Joint Chapter 11 Plan, 499 (Aug. 31, 2011), Lehman Brothers Holdings, Inc. and Its Affiliated Debtors, Notice Regarding Fifth Distribution Pursuant to the Modified Third Amended Joint Chapter 11 Plan, Exhibit A (Mar. 27, 2014). Numbers do not sum due to rounding.

Finally, social welfare is also substantially improved relative to Lehman's Chapter 11 case. If this analysis is credible and markets believe it to be so, then the conviction that there is a rules-driven and systematic way to undergo resolution and to allocate losses will further reduce incentives for any parties at interest to run, either before or after a financial institution undergoes Chapter 14. These reduced incentives will, in turn, lower the overall expected costs of Chapter 14, increasing the likelihood that policymakers actually use Chapter 14, rather than passing new legislation in a crisis. In this way, Chapter 14 also avoids the time-inconsistency problem of bailouts. Policymakers who believe they have an existing legal option that will sufficiently minimize any risks of systemic consequences will have no incentive to respond to a possible crisis by passing new legislation to re-allow bailouts. Overall, these effects reduce moral hazard, without increasing systemic risks.

Conclusion

This paper began with a brief recapitulation of the financial turmoil of the fall of 2008 and the impacts that Lehman Brothers' bankruptcy may have had on that turmoil. In part I, I argued that Chapter 14 can address the problems of Chapter 11 and bailouts by avoiding the threat of a run cascade while imposing losses onto a substantial portion of creditors. As preparation for parts III and IV, part II described important details of Lehman's demise from the perspective of a Chapter 14 counterfactual, most importantly that Lehman failed due to insolvency and therefore was a strong candidate for the solutions Chapter 14 offers.

Part III began by laying out the structure of the counterfactual world. Importantly, it assumed that Dodd Frank and Chapter 14 exist in tandem and that international authorities agree to neither place foreign subsidiaries into resolution nor ring-fence foreign assets. It then argued that Chapter 14's requirements for certifications of both systemic risk and adequate assurance of future performance indicate that a Chapter 14 case could have been filed for Lehman between mid-July 2008 and September 5, 2008. Using the latter as the hypothetical counterfactual filing date, part III then walked through how a Chapter 14 Lehman weekend would have worked and showed that, though

the time frame to effectuate a section 1405 transfer is short, it would have been relatively straightforward—at least with planning in a living will—to make the necessary legal findings quickly.

Part IV analyzed the consequences of a Chapter 14 case. Given the amount of capital-structure debt that would be left behind, even fairly extreme estimates of losses suggest that New Lehman would be solvent and would have a variety of options for reorganizing the business in order to minimize losses for the Estate. And under newly proposed gone-concern loss-absorbing capacity (GLAC) requirements, the amount of capital-structure debt left behind would have been even greater.

The more challenging question than whether New Lehman would be solvent is whether there would be a run on New Lehman, how large such a run might be, and whether New Lehman would withstand such a run. Subpart IV.B contended that though there would have been almost no reason to run for fear of insolvency, some creditors might have run anyway. It then argued that a counterfactual stress test of New Lehman's liquidity position shows that New Lehman would have withstood a moderate run if central banks had been willing to offer secured liquidity. Lehman's case therefore underscores David Skeel's argument in this volume that concerns about financing a large financial firm in a quick sale may be overblown. Part IV closed with an assessment of the losses that would have arisen for various parties out of this process and noted that, though capital-structure-debt holders would bear greater losses than any other creditors, even they would do at least as well under Chapter 14 as they did in Lehman's actual case.

Had these outcomes been expected, a rational assessment of the costs of using Chapter 14 for Lehman would have shown it to be a legitimate alternative to a bailout that not only offered a social welfare improvement but also provided an attractive option to policymakers. In conjunction with other critical measures such as capital requirements and safety and soundness regulation, Chapter 14 offers a way forward toward reduced moral hazard without increasing the risk of systemic effects from bank resolution. It may not solve the problem of "too big to fail," but it does reinstitute bankruptcy as the legal procedure of first resort for failing corporations.