



BEYOND THE MINSKY MOMENT

Where We've Been, Why We Can't Go Back, and the
Road Ahead for Financial Reform

April 2012



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PREFACE

In December 2007, when most analysts were confident that the subprime mortgage crisis would be “contained” without major impact on the financial system, the Levy Institute issued Working Paper No. 523, which concluded as follows:

The stage is set for a typical Minsky debt deflation in which position has to be sold to make position—that is, the underlying assets have to be sold in order to repay investors. This will take place in illiquid markets, which means that price declines and, thus, the negative impact on present value will be even more rapid. In this environment, declining short-term interest rates can have little impact. . . .

The damage from a debt deflation will be widespread—borrowers who lose their homes, hedge funds that fail, pensions that are reduced—so the net overall impact will be across a number of different sectors. However, in difference to what Alan Greenspan argued in defense of financial engineering to produce more complete markets—that it provided for a better distribution of risk across those who are willing to bear it—the risk appears to be highly concentrated in core money center banks who, at present, are increasingly unable to bear it. The Fed’s survey of lending conditions currently suggests that banks are curtailing lending and tightening credit conditions. This suggests that lending to households, whose spending in the current recovery has been financed by structured finance, is likely to decline dramatically. If the availability of household finance collapses, it is also likely that the long predicted but never realized retrenchment of consumer spending may become a reality, buttressed by the continued decline in the dollar, producing rising import prices. That, along with rising petroleum prices, will further reduce real incomes and make meeting mortgage debt service that much more difficult. The system thus seems poised for a Minsky-Fisher style debt deflation that further interest rate reductions will be powerless to stop. . . .

Given that the crisis appears to be similar to that which led to the breakdown of the financial system through debt deflation in the 1930s, a similar remedy in the form of a Reconstruction Finance Corporation and reregulation of the system would seem to be the most efficient means to prevent, in Hy Minsky’s words, “IT” from happening again.

Levy Institute scholars clearly expected an alternative evolution of events, one that would threaten the very foundations of the financial system and confirm Minsky’s thesis concerning the inevitability of major financial crisis as an endogenous result of the operation of the financial system. Along with a small number of professionals who had identified these conditions as a “Minsky moment,” Levy Institute scholars continued to analyze the causes and implications of the crisis on the basis of the late Levy Institute Distinguished Scholar Hyman Minsky’s “financial fragility hypothesis.”

As the crisis evolved and attention turned to the appropriate changes in financial regulation that would be imperative to return the financial system to stability, Levy scholars highlighted the fact that Minsky’s

initial research on financial fragility had emerged from his early work for the Commission on Money and Credit and the Federal Reserve Board on the regulation of the financial system. Building on this work, they provided proposals for reform, and when these were ignored, constructive criticism of the process of congressional debate that produced the Dodd-Frank Act.

In light of these Minskyan insights, and in the interests of providing guidance for a restructuring of the financial system, this monograph traces the roots of the 2008 financial meltdown to the structural and regulatory changes that transpired in the evolution from the 1933 Glass-Steagall Act to the 1999 Gramm-Leach-Bliley Act, and on through to the subprime-triggered crash. It evaluates the regulatory reactions that occurred during and following the global financial crisis—most notably, the 2010 Dodd-Frank Act—and attempts, with the help of Minsky’s work, to sketch a way forward for reregulating and restructuring the financial system to provide for the stability and capital development of the economy.

There are a wide variety of explanations offered for the 2008 meltdown, but none are sufficient to account for the crisis without an understanding of the financial system’s underlying brittleness, and why it had developed. Subprime mortgages were only the trigger. More fundamental was the progress toward what Minsky baptized “money manager capitalism,” a financial system characterized by highly leveraged funds directed by professional investment managers seeking maximum returns in an environment that systematically underprices risk. The monograph outlines this development and explains how money manager capitalism set the stage for the outbreak of the systemic crisis and debt deflation through which we are still living.

While the Gramm-Leach-Bliley Act produced a profound change in financial regulation, formally abolishing the New Deal financial regulation that had supported financial stability for at least 20 years after its introduction, there is a deeper regulatory story that begins well before 1999. By the time the Gramm-Leach-Bliley Financial Services Modernization Act was passed into law, the unraveling of the Glass-Steagall regime was already a *fait accompli*, due to a long string of administrative and judicial rulings that had gradually weakened the regime’s separation of commercial and investment banking. The story of Glass-Steagall’s demise is not only an object lesson in the short half-life of regulatory structures, but also helps provide insights into how—and how not—to move forward with financial reform. The monograph explains that, despite calls for a return to Glass-Steagall, we cannot turn back the clock. As Minsky emphasized, regulation has to match the financial structure of the times; he believed that Glass was already outmoded when it was introduced. Indeed, this is probably the fate of all financial regulation.

While Congress did move to take more comprehensive steps in 2010, with the passage of Dodd-Frank Act, an analysis of some of the key provisions of the Act suggests that Dodd-Frank is not likely to prevent another serious systemic crisis.

If the present regulatory environment is unacceptable, and we cannot return to the New Deal-era structure, how do we move forward? Minsky’s blueprint for a more stable financial structure is in sync with those who believe that the only way to deal with the problem of banks that are “too big to regulate, and too big to fail” is to break them down into smaller units. Smaller banks, more closely linked

to their borrowers and the community, would provide the possibility of restoring relationship banking—a banking model that concentrates on the creditworthiness of borrowers rather than on maximizing the generation of doubtful assets to be sold via securitization, and one that is far more conducive to the capital development of the economy.

Finally, in light of what look like major hurdles facing the implementation of Dodd-Frank, the monograph concludes with a possible way out provided by modifying and extending Minsky's idea for creating a bank holding company system that would preserve some of the features of Glass-Steagall. This could be accomplished through reversing some of the regulatory decisions and legal rulings that allowed for alternative sources of liquidity creation—a dynamic that was central to undermining the Glass-Steagall separation of financial institutions according to function. The challenge is to allow banks to earn competitive rates of return as they focus on financing capital development.

It remains to be seen how much of the Dodd-Frank Act, an already outmoded solution to the still-looming problem of financial fragility, will survive the rulemaking and implementation process. The next crisis may reveal just how inadequate the status quo regulatory response has been. It may be only then, in the grips of the next crisis, that sufficient momentum will emerge for fashioning financial reforms that promote enterprise and industry over speculation.

The work that is summarized in the present monograph built on and extended the research program that Minsky had instituted during his tenure at the Institute until his death in 1996. Minsky recognized the ever-present need for the financial structure to be in concert with the evolutionary nature of financial innovation. The satisfactory performance of a capitalist economy depends upon the suitability of the structure of regulation. But the consequences of regulatory structures and interventions change over time—interventions that start out being constructive can be transformed into sources of instability and inefficiency. The debacle of the securitization of subprime mortgages, together with the slicing and dicing of those securities and the overlaying of derivative instruments, demonstrates that a structure of regulation and intervention that is initially successful can come to have perverse consequences. Recent experiences with mortgage-backed securities, the assorted off-balance-sheet special-purpose vehicles, and credit default swaps do not speak in favor of *laissez-faire*. Rather, they support the argument that intervention cannot be frozen in time—that it must adapt to evolutionary changes in institutions and practices. Successful capitalism requires both a structure of regulation and a sophisticated awareness of the way profit-seeking activities drive changes in business and behavior.

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INTRODUCTION

A new era of reform cannot be simply a series of piecemeal changes. Rather, a thorough, integrated approach to our economic problems must be developed; policy must range over the entire economic landscape and fit the pieces together in a consistent, workable way: Piecemeal approaches and patchwork changes will only make a bad situation worse.

—Hyman P. Minsky, *Stabilizing an Unstable Economy*

It's been almost five years since the outbreak of the global financial crisis. Stepping back and surveying the last half decade's worth of policy responses in the United States, what we see before us looks very much like the "piecemeal" and "patchwork" pattern of reform that Minsky cautioned against in *Stabilizing an Unstable Economy* (1986). What's more, if there ever was any real political space for fundamental reform of the financial system, it has since disappeared, even as the economic wounds left by the crisis continue to fester. The battle to shape the rule-making and implementation process of the 2010 Dodd-Frank Act is ongoing, but as this monograph attempts to clarify, Dodd-Frank—indeed, the whole host of policy reactions (and nonreactions) since 2007—is largely undergirded by an approach to financial regulation that is incomplete and inadequate.

Another serious financial crisis, another so-called "Minsky moment," may be required to reopen the window of opportunity for reform of the financial structure that goes beyond the piecemeal and patchwork. Understanding Minsky's work can help us to evaluate the existing policy responses to the global financial crisis, to understand how the crisis emerged, and to help prepare us to better seize the next opportunity to fundamentally restructure and reregulate the financial system.

Despite the well-known phrase, Minsky's approach had little to do with "moments." It was about the sustained, cumulative processes in which periods of stability induce an endogenous increase in potential financial fragility. Fragility provides the fertile ground for financial instability, leading to a process of debt deflation and a full-blown Minsky crisis. While the crisis of 2007–09 was not, strictly speaking, inevitable, the structural transformation that the economy had undergone in its transition to what Minsky called "money manager capitalism" rendered the financial system highly vulnerable to a shock. The shock happened to emanate from the subprime mortgage market, but the fact that the subprime crisis was able to spread to the rest of the financial system and set off a full-scale bout of systemic instability and debt deflation can be explained by pointing to a process of sustained and increasing financial fragility in the rest of the financial structure. To understand this process, we need to look beyond the specific financial instruments implicated in the crisis to an analysis of the evolution of the US financial system. A mere analysis of the "moment" is not sufficient for this purpose.

As Minsky emphasized beginning with his earliest work on financial market regulation, it is impossible to design regulations that increase the stability of financial markets if you do not have a theory of financial market instability. If the "normal" precludes instability, except as a random ad hoc event, regulation will

always be dealing with ad hoc events that are unlikely to occur again. As a result, the regulations will be powerless to prevent future instability. Instead, Minsky argued that what was required was a theory in which financial instability was a normal occurrence in the system. Only on the basis of such a theory could regulation be designed and understood.

By the same token, regulation of the system cannot be effective if it is simply based on measures produced to remedy and reverse the conditions generated by the current “moment.” It needs to reformulate the structure of the financial system itself. Unfortunately, the current approach to regulation seeks to remedy the present moment by applying to existing financial institutions and their existing business models a series of cosmetic changes, leaving the basic structure of the system unchanged in some crucial respects. If this were only a Minsky “moment,” its analysis could not provide the basis for effective reregulation. Effective proposals can only emerge from analysis of the longer-term structural changes.

As noted, Minsky’s theory was not one that dealt in moments but rather in fundamental changes in the structure of the financial system and the operations of financial institutions. Therefore, the framework for reregulation must start with an understanding of the longer-term systemic changes that took place between the New Deal reforms—principally, the Glass-Steagall Act of 1933—and their formal repeal under the Gramm-Leach-Bliley (GLB) Financial Services Modernization Act of 1999, “An act to enhance competition in the financial services industry by providing a prudential framework for the affiliation of banks, securities firms, insurance companies, and other financial service providers, and for other purposes.”

The New Deal reforms were eroded by an internal process in which commercial banks that were given a monopoly position in deposit taking sought to remove those protections because unregulated banks were able to provide substitute instruments that were more efficient but unavailable to regulated banks, since they involved securities market activities that would eventually be recognized as securitization. Regulators and the courts contributed to this process by progressively ruling that these activities were related to the regulated activities of the commercial banks, allowing them to reclaim securities market activities that had been precluded in the New Deal legislation. The 1999 Act simply made official the de facto repeal of the 1930s protections.

Chapter 1 of this monograph begins with an outline of Minsky’s account of the evolution of the financial system toward a stage he called “money manager capitalism” and of this stage’s particular vulnerabilities. While best known for his analysis and explanation of financial fragility, Minsky was primarily concerned in his work to provide guidance for proposals to create a financial structure that provides a safe and secure payments system as well as for the capital development of the economy. Chapter 2 outlines his views on how banks in particular and the financial structure in general should be organized and regulated in the better pursuit of these objectives. Against this background, chapter 3 examines the immediate regulatory reactions that were taken during the global financial crisis. These piecemeal measures were clearly insufficient to forestall the crisis, and in the aftermath Congress produced more comprehensive and wide-ranging legislation. Chapter 4 analyzes some key provisions of the Dodd-Frank Act from a Minskyan perspective. Difficulties in implementing many of the provisions of

the new legislation have led to calls for a return to some of the arrangements of the New Deal regulations. Chapter 5 explains why this is not a viable proposal, given the steady erosion of Glass-Steagall by a combination of judicial, administrative, and regulatory decisions. And finally, chapter 6 considers a set of proposals by Minsky for a bank holding company system that would preserve the major attributes of Glass-Steagall while meeting the objectives of a stable transaction system and providing for the capital development of the economy. While it is unlikely that these changes will be introduced into the current GLB holding company structure, they do provide the basis for a series of reforms that could be introduced without major legislative change and that would provide for a more stable financial system.

CHAPTER 1. Roots of the Crisis—the Minsky Half Century

A whole host of explanations for the 2008 meltdown of the financial system has been offered: irrational exuberance; a collapse of ethical behavior that supported greed, lax regulation and oversight; faulty application of accounting regulations such as mark to market pricing; inappropriate incentives that fostered control fraud; international imbalances that flooded the securities markets and reinforced an easy money policy and reduced interest rates; rising inequality that encouraged households to borrow to support spending. Unfortunately, none of these explanations fully recognize the systemic nature of the financial crisis in the United States and its global implications.

Many accounts blame the financial collapse on the sharp rise in the issue and securitization of subprime mortgages (home loans made to riskier borrowers, typically low-income households), but that is much too simple. At less than \$2 trillion, the total subprime universe was modest relative to the size of the US mortgage market, much less as a share of US GDP; the number of defaults was not, on its own, sufficient to explain a crash of the magnitude that occurred. What allowed this event to activate a global financial panic and a resulting debt deflation was a long-term buildup of “innovative” financial structures that eventually transformed into instability of the economy, a process anticipated by Minsky in his analysis of the financial system beginning in the late 1950s.

We should not view the global financial crisis as simply a moment that can be traced to recent developments. Rather, as Minsky had been arguing for nearly 50 years, what we have seen is a slow transformation of the global financial system toward what he called “money manager capitalism,” which finally collapsed in 2007. Rather than a moment, it is perhaps better called the “Minsky half-century” (Wray 2009).

It is essential to recognize that we have had a long series of crises, and the trend has been toward more severe and more frequent crises: municipal bonds in the mid-1960s; real estate investment trusts in the early 1970s; developing country debt in the early 1980s; commercial real estate, junk bonds, and the thrift crisis in the United States (with banking crises in many other nations) in the 1980s; stock market crashes in 1987, 1989, and again in 2000 with the dot-com bust; the Japanese meltdown of the late 1980s; Long-Term Capital Management, the Russian default, and Asian debt crises in the late 1990s; and so on.

For Minsky, the underlying problem of the postwar financial system governed by Glass-Steagall regulation was the emergence of what he baptized “money manager capitalism,” a financial system characterized by highly leveraged funds seeking maximum returns in an environment that systematically underprices risk and fails to provide financing for the capital development of the economic system. Money manager capitalism is marked by the potential for deep instability, with massive pools of funds directed by professional investment managers seeking the highest possible returns, generating successive speculative bubbles in stocks, real estate, and commodities. Examples of these managed institutional entities include pension funds, mutual funds, insurance funds, and, more recently, sovereign wealth funds. With progressive elimination of Glass-Steagall regulations and the advent of

“light touch” supervision of financial institutions, money managers concocted increasingly esoteric and opaque financial instruments that quickly spread around the world. Contrary to the prevailing view that market competition and counterparty surveillance will ensure stability in the system, markets for financial assets have repeatedly shown a tendency to generate perverse incentives for excess risk, punishing the timid manager with low returns and encouraging those who take higher risk with a better opportunity for survival. Those playing along are rewarded with high returns because highly leveraged funding drives up prices for the underlying assets, whether they are dot-com stocks, Las Vegas homes, or corn futures.

Many have accurately described the phenomenon as “financialization”—growing debt that leverages income flows and wealth. At the 2007 peak, total debt in the United States reached a record five times GDP (versus three times GDP in 1929), with most of that being the private debt of households and firms. From 1996 until 2007, the US private sector spent more than its income every year, except during the recession that followed the 2000 dot-com bust. Financial institutions’ debt also grew spectacularly over the past two decades, totaling more than GDP. Exotic financial instruments like credit default swaps, or CDSs (bets on failure of assets, firms, and even governments), exploded.

The entire financial system had evolved in a manner that made “it”—an economic collapse and debt deflation—possible. Riskier practices had been permitted by regulators and encouraged by rewards and incentives. The combination of “big government” deficits and “big bank” interventions (such as the Greenspan put), plus bailouts of “too big to fail” institutions, reinforced the rewards of higher-risk strategies while eliminating any penalties of loss. The absence of depressions allowed financial wealth to grow over the entire postwar period, including personal savings and pension funds. The managers of all of these funds needed to earn benchmark returns or better to retain their commissions and their jobs. As a result they were encouraged to follow the highest risk strategies prevailing in the market and the financial sector continued to grow at rates higher than GDP; as a percent of value added, the financial sector grew from 10 percent to 20 percent, and its share of corporate profits quadrupled from about 10 percent to 40 percent from 1960 to 2007 (Nersisyan and Wray 2010).

What Minsky called the “money manager” stage in the evolution of capitalism ushered in a convergence of the activities of financial institutions. New Deal reforms had imposed a segregation of financial institutions by function—commercial banking, investment banking, savings and loans, and insurance—and each had their own lines of business (with heavier supervision of commercial banks and thrifts). Minsky argued that the convergence of the various types of banks under the umbrella of the bank holding company, and within “shadow banks,” was fueled by the growth of managed money. Over time, commercial banks lost market share to institutions subject to fewer constraints on leverage ratios, on interest rates that could be paid, and over types of eligible assets. Huge pools of managed money offered an alternative source of funding for commercial activities. Firms would sell commercial paper or junk bonds to unregulated financial institutions and hedge funds rather than borrowing from banks. And, importantly, securitization took many types of loans off the books of banks and into affiliates (special investment vehicles or special-purpose entities—SIVs and SPEs) and managed money funds. Banks continually innovated in an attempt to get around regulations, while government deregulated in a

futile effort to keep banks competitive. In the end, government gave up and eliminated functional separation in 1999 with the GLB Act.

This convergence was also encouraged by the expansion of the government safety net; or, as Minsky put it, by “a proliferation of government endorsements of private obligations” (Minsky 1992c, 39). Indeed, it is impossible to tell the story of the current crisis without reference to the explicit and implicit guarantees given by the Treasury to the mortgage market through its government-sponsored enterprises (Fannie Mae and Freddie Mac), through the student loan market (Sallie Mae), and through Federal Reserve monetary policy in the form of the Greenspan put and Ben Bernanke’s “great moderation,” all of which gave markets the impression that the government would never let them fail.

In the aftermath of the crisis, the government’s guarantee of liabilities went far beyond Federal Deposit Insurance Corporation (FDIC)–insured deposits and Fannie and Freddie guarantees of mortgage securities to cover larger-denomination deposits as well as money market funds, and the Fed extended lender-of-last-resort facilities to virtually all financial institutions (with bailouts also going to auto companies and so on). This was a foregone conclusion once Glass-Steagall was circumvented and then replaced by GLB, and investment banking, commercial banking, and all manner of financial services were consolidated in a single financial holding company structure with explicit government guarantees over a portion of the liabilities. Financial institution indebtedness grew to some 120 percent of GDP—the leveraging and layering of national income that Minsky addressed—with complex and unknowable linkages among regulated bank subsidiaries of financial holding companies and the unregulated shadow banking system. Clearly, if problems developed somewhere in a highly integrated system, the Treasury and Fed would be on the hook to rescue any financial institution.

As late as the 1990s, the big investment banks were still partnerships, so they were unable to directly benefit from the run-up of the stock market—a situation similar to 1929. An investment bank could earn fees by arranging initial public offerings for start-ups, and it could trade stocks for others or for its own account. But in the irrational exuberance of the late 1990s, that looked like small change. How could an investment bank get a bigger share of the stock market action? In 1999, the largest partnerships went public in response to the repeal of Glass-Steagall. The GLB legislation shifted the balance of power from investment banks to former commercial banks, which could now enter investment banking with much larger balance sheets and the benefit of cheap core deposit funding in their regulated banking facilities. Commercial banks could now provide cheap, short-term funding against a commitment for more lucrative investment banking business. The former investment banks thus sought to expand their funding ability by going public to raise funds and moved into proprietary trading to offset the loss of revenues from competition in more traditional investment banking activities. This also offered the possibility of providing incentives to increased risk in their trading activities in the form of stock option remuneration. Eventually, investment banks would disappear, choosing to become financial holding companies instead.

Before this transformation, trading profits were a small part of investment bank revenues. For example, before Goldman Sachs went public, only 28 percent of its revenues came from trading and investing activities. As of April 2010, that figure had grown to about 80 percent. While many think of Goldman and

JPMorgan Chase (the investment banks remaining after the demise of Lehman Brothers, Bear Stearns, and Merrill Lynch, all of which folded or were absorbed by other firms) as banks, they are really more like huge hedge funds, albeit very special ones that now hold bank charters, granted during the crisis when investment banks were having trouble refinancing positions in assets—giving them access to the Fed’s discount window and to FDIC insurance. That, in turn, lets them obtain funding at near-zero interest rates. Indeed, in 2009 Goldman spent only slightly more than \$5 billion to borrow, versus \$26 billion in interest expenses in 2008—a \$21 billion subsidy thanks to its access to cheap, government-insured deposits. The two remaining investment banks were also widely believed to be “backstopped” by the government—under no circumstances would they be allowed to fail—keeping stock prices up (see Wray 2010).

In some ways, things were even worse than they had been in 1929 because the investment banks had gone public, issuing equities directly into the portfolios of households and indirectly to households through the portfolios of managed money. Therefore, Goldman or Merrill could not simply jettison one of its unwanted offspring: problems with the stock or other liabilities of the behemoth financial institutions would rattle Wall Street and threaten the solvency of pension and other invested funds. This finally became clear to the authorities after the problems with Bear Stearns and Lehman. The layering and linkages among firms—made opaque by over-the-counter (OTC) derivatives such as CDSs—made it impossible to let them fail one by one, as the failure of one would bring down the whole house of cards.

The degree of financial fragility inherent in this configuration of the financial system may be seen in the fact that total financial liabilities in the United States rose to about five times GDP (versus 300 percent in 1929), so that every dollar of income had to service five dollars of debt. That is an average leverage ratio of five times income. That is one way to measure leverage. For, as Minsky argued, a low leverage ratio is, historically, the important measure for bank profitability—which ultimately must be linked to repayment of principle and interest out of income flows.

Another measure, of course, is the ratio of debt to assets. This became increasingly important during the real estate boom, when mortgage brokers would find financing for 100 percent or more of the value of a mortgage, on the expectation that real estate prices would rise. That is a trader’s, not a banker’s, perspective, since it relies on either sale of the asset or refinancing. A traditional banker might feel safe with a capital leverage ratio of 12 to 1, with careful underwriting to ensure that the borrower would be able to make payments. With equity at risk, underwriting is essential.

However, for a mortgage originator or securitizer who has no plans to hold the mortgage, what matters is the ability to place the security. Many considerations then come into play, including prospective asset price appreciation, credit ratings, monoline insurance, the purchase of CDS protection, and “overcollateralization” (the inclusion of assets with a higher value than the liabilities issued in a securitization). It is not necessary to analyze the details of these complex instruments. What is important is that income flows take a backseat in such arrangements, and acceptable capital leverage ratios are much higher. For money managers, capital leverage ratios are 30 to 1, and can reach up to several hundred. But even these large numbers hide the reality that risk exposures can be very much higher, since many commitments are not reported on balance sheets. There are unknown and

essentially unquantifiable risks entailed in the ability of counterparties to meet their commitments. For example, the hedge of the sale of credit protection in a CDS by means of the purchase of an offsetting CDS is only effective if the counterparty has the capacity to pay in the event of default. Because balance sheets are linked in highly complex and uncertain ways, the failure of one counterparty can have repercussions that impact the entire system. The failure of AIG's Financial Products unit made this possibility a reality.

Minsky's writings in early 1992 addressed the banking crisis at that time (which followed the 1980s savings-and-loan crisis), but most of his points could be applied to the continuing evolution of the financial structure, which finally collapsed in 2008. He warned that the financial conservatism of the early postwar years had "ushered in a new era of pervasive casino capitalism"—with the leveraged buyouts of the late 1980s serving as a good example of the excesses (Minsky 1992d: II, 9). Much of that boom was driven by pension funds, "both as suppliers of the equity base for leveraged buy outs and as the takers of the high yield bonds (junk bonds). . . . Systemic overindebtedness may well be a legacy of pension funds in the United States."

Minsky argued that the decrease in the power of banks and the concomitant rise of the power of institutional investors' managed money had "little to do with the movement to deregulate banks and other financial institutions." Instead, he blamed the 1979–82 Volcker experiment in monetarism that wiped out bank and thrift equity, payments-system innovations (such as electronic funds transfers and credit cards) that took away cheap deposit sources of bank funds, and the "change in the international clout of the United States" as far more important (Minsky 1992d: II, 12). Thus, Minsky attributed the financial sector's transformative shift away from banking and toward managed money, which occurred over a long period, to complex, and mostly endogenous, factors. While deregulation (in the early 1980s, and then again in the late 1990s, after Minsky's death) played a role, Minsky insisted that this was of secondary importance.

On the eve of the 2008 "ides of September" meltdown, many financial services were supposed to have been intermediated by efficient "markets." However, this shift was more apparent than real, since the dominant financial institutions controlled those markets and set the prices of financial assets (often using complex and proprietary models). A handful of financial behemoths provided the four main financial services: commercial banking (short-term finance for business and government), payments (for households, firms, and government), investment banking (long-term finance for firms and government), and mortgages (residential and commercial real estate). Debts were securitized and ultimately held in pension, university endowment, and sovereign wealth funds.

One of the most important structural changes that was facilitated by the advent of money manager capitalism was the shift in lending procedures, from lending and holding the asset on the balance sheet to lending and selling the asset to the capital market. The resulting "originate-to-distribute" business model of banks virtually eliminated due-diligence assessment of credit worthiness. In mortgage lending, it was replaced by a combination of property valuation by assessors who were paid to overvalue real estate, by credit ratings agencies who were paid to overrate securities, by accountants who were paid to ignore problems, and by monoline insurers whose promises were not backed by sufficient loss reserves.

The mortgages were Ponzi schemes from the very beginning: they required rising real estate prices as well as continual access to refinance because borrowers did not have the capacity to service the loans (Kregel 2008a). Much of the origination activity actually took place outside the banks and thrifts, with mortgage originators and brokers writing mortgages and arranging for finance, then selling them to investment banks who packaged them into collateralized securities, to be sold to institutional investors and hedge funds. While Fannie and Freddie have been subjected to much ridicule, in truth neither of them made or arranged any of the mortgages, and they only began to purchase toxic securities because they were encouraged to play a role in preventing what was seen as an impending disaster and the collapse of the entire mortgage market.

When declining prices made it impossible to refinance positions and delinquencies, and defaults on mortgages rose, the impact was quickly transmitted back to bank balance sheets because they held these securities in “warehouse” in anticipation of sale through securitization, and they were called upon to make good on the protection of collateralized mortgage securities that they had sold via credit default swaps or through “buyback” guarantees on securities they had sold. As credit tightened, these exposures could not be refinanced and there was no market in which to sell them.

One way that financial institutions devised to deal with the need to sell into a collapsing market involved the creation of collateralized structures that were designed to fail—that is, in which the underlying mortgages were designed to default. These structures could be filled with the unwanted and unsalable residential mortgage-backed securities held by the banks and sold to institutional investors. At the same time, the mortgage desks of the large investment banks, as well as a number of hedge fund investors, believed that they could profit from what they considered to be the impending collapse of the entire collateralized mortgage market.

Many hedge fund managers had identified the Ponzi nature of the housing bubble early on, and attempted to take short positions on the market (see Lewis 2010). Most of these strategies used the purchase of credit default swaps on what were considered to be the weakest collateralized mortgage obligations (CMOs) backed by subprime mortgages. A basic difficulty in taking a short position is in creating and funding the short position. Thus, the purchase of a CDS required periodic payments of the premium, and as John Maynard Keynes was one of the first to point out, the market can stay irrational for longer than you can remain solvent if you have to fund a short position.

However, some managers, in consort with the investment banks, produced a scheme to create CMOs that would fail. Thus, paradoxically, the need to offset the inability to sell out positions led to an increase in synthetic CMOs to be used in strategies to produce profits by shorting the market.

A CMO is arranged in credit tranches, from those rated investment grade with the lowest credit risk and lowest rate of return, to the residual or first-loss equity or trash tranche, which has no official rating and has the highest risk and the highest return because it absorbs initial losses from arrears or default. An investor who purchases the equity tranche of a bespoke synthetic CMO runs a high risk of loss, against a high return. Since even the worst-performing CMOs usually pay out for the first few quarters, a long equity tranche position generates the income that finances the short position, represented by the CDSs

purchased on the mezzanine tranches, which were expected to default very quickly. This was insured because the investor who provided the funds for the equity tranche of each deal became the sponsor, with the ability to select or to advise the managers of the securitization on their preference for mortgage pools with high-risk, high-equity payout and therefore a high probability of rapid payment failure. Thus, the income on the long equity tranche covers the premium payments on the CDS protection, so the short position is created at zero financing cost. When the mezzanine tranche defaults, the equity tranche is lost, but the full value of the insured mezzanine tranche is received, producing a profit from the collapse of the CMO.

The short speculator or a bank seeking to offset its long position could thus bet against higher tranches while shorting the collateralized debt obligations (CDOs) that they had helped design. The Illinois-based hedge fund Magnetar Capital used the income from the equity tranche to finance its much larger speculative short position on BBB-rated subprime bond tranches—what would come to be known as the “Magnetar trade.” As in the other strategies discussed above, the position only provides the expected gains if both the equity and the mezzanine or higher tranches all default at around the same time.

The central role played by credit default swaps in facilitating these structures should be clear. It also should be clear that if they had been regulated as insurance contracts, these strategies would have been illegal. With no regulation of CDSs, these structures were completely legal.

Recall that these speculators were not simply acting on their beliefs by selling what they thought were overpriced CMO tranches, or by buying CDS coverage for overpriced tranches; they were in fact creating CMOs that were designed to fail so that they could profit from their ensured default. This is quite different from the normal justification for allowing short sellers to take naked positions in order to provide equality between long and short positions. It is also quite different from the original intention of securitization, which was to package illiquid, unsalable subprime paper into a structure that could be sold as investment-grade paper to institutional investors.

The *Wall Street Journal* (Mollenkamp and Ng 2008) reported that Magnetar’s “constellation” CMO issuance could have been in the range of \$30 billion. Exact figures are impossible to determine because Magnetar never took a direct role as a manager or underwriter/issuer of a CMO. Smith (2010) cites industry sources as estimating that Magnetar alone was responsible for “at least 35%, perhaps as much as 60%, of the subprime bonds issued in 2006” (260). As noted, the Levin Senate Committee Report makes it clear that Magnetar was not the only actor in this drama; major investment banks were also active participants, since they used such structures as a method to remove doubtful mortgages from warehouse holdings and other unsold pieces of prior transactions.

The short sellers who had correctly gauged the market were proven to be correct, not because of their analytical ability, but because of their perfect foresight due to the fact that they had constructed deals that were destined to fail. Most of the securitizations that were issued from 2006 onward, and the mortgage-backed securities that entered CMOs written from 2006 onward, were designed to default.

Smith also notes that the “synthetic component created demand for subprime loans by a less direct mechanism, by compressing credit spreads. That is a fancy way of saying they lowered interest rates.

Credit default swap spreads and cash bond spreads are linked via arbitrage. If credit default swap spreads tighten, that is tantamount to having the price of the credit default insurance drop. The protection writers (guarantors) receive less, and the protection buyers pay less. When that happens, spreads on the related bonds drop, which lowers the cost of borrowing” (ibid., 261–62).

In the aftermath of the crisis it has become common to consider those who recognized and predicted the instability inherent in the subprime mortgage boom as heroes (see Lewis 2010). Their short positions have been considered as a means of increasing stability by offsetting the excessive optimism that produced the real estate bubble. However, many distorted the market in order to profit from short positions and were in fact among the major contributors to the persistence of the bubble and its spread to financial institutions around the world. The action to increase the production of synthetic CMOs to facilitate their mezzanine short trades acted to reduce credit default swap costs as well as subprime bond spreads, lowering rates for subprime borrowers and prolonging the issue of toxic mortgages. The use of credit default swaps in these speculative structures increased the exposure to subprime adjustable-rate mortgages and increased the eventual losses to much higher levels, and to many more players, than would have been the case had CDS securitizations been prohibited.

And the parties on the other side of this trade were in large measure the capital markets players, such as investment banks, European banks that held triple-A CDO inventory, and insurers of various sorts. These institutions were all highly levered and therefore fragile. All suffered or will suffer terminal losses; the survivors owe their existence to massive taxpayer bailouts, central bank subsidies, and regulatory forbearance.

Thus, even after most mortgage brokers had stopped originating doubtful, fraudulent subprime mortgages, investment banks continued to create and market CMOs that were designed by short investors to fail, and these certain-to-fail investments were sold to European banks, investment funds, and even local authorities who believed that they were buying investment-grade AAA assets. In this case, short investors were not only expressing a negative opinion on the prospects of mortgage-backed instruments, they were also increasing the supply of instruments that were guaranteed to fail, and prolonged the purchase of these instruments for about two years after there were extreme doubts about the value of existing assets.

It seems clear that the short sellers did little to curtail the irrational exuberance of the market and indeed did much to extend it, even providing for the creation of impaired mortgage assets, after originators had stopped issuing them to real borrowers, through the use of synthetic securitizations. This raises the question of whether such activity would have been curtailed by the clearing and trading of CDS contracts in organized institutions. It seems clear that it would have made little difference to the strategies that were employed, since the opacity occurred due to the influence of the short speculator on the choices of the reference assets made by the manager of the securitization. Whether or not the CDSs that made up the corpus of the structure were traded transparently would have made little difference. However, the ability to write naked CDSs was crucial to these structures. If naked CDSs had been illegal, the synthetic CMOs that caused much of the trouble could not have existed.

While there is now a fuller understanding of the failures of the financial structure that emerged from the GLB Act's allowing banks full rein to operate across all financial markets, the approach to reregulation that takes Minsky's work to heart would look beyond the proximate trigger for the latest crisis—beyond the mere subprime-meltdown moment—to the fragile financial structure that developed with the ascendancy of managed money. As we will see in the next chapter, Minsky had a completely different view of how the system should have evolved from Glass-Steagall and the rise to dominance of money manager capitalism.

CHAPTER 2. Blueprint for a More Stable Financial System

The crisis that is described in chapter 1 was in large part a result of the process of deregulation that occurred in the 1980s. Instead of producing a more stable financial system, these regulatory changes led to the repeal of Glass-Steagall in the 1999 “act to enhance competition in the financial services industry by providing a prudential framework for the affiliation of banks, securities firms, insurance companies, and other financial service providers, and for other purposes,” better known as the Gramm-Leach-Bliley (GLB) Financial Services Modernization Act. None of the regulatory changes that were introduced to replace Glass-Steagall correspond to the changes that Minsky would have recommended.

But there is another basic difference between Glass-Steagall and the later regulations that led to the collapse of the system. The 1933 legislation was written with a very clear idea of the causes of the collapse of the financial system following the stock market crash of 1929, and was based on a similarly clear idea of the desired structure of the reformed financial system (see Kregel 2009a). Regulations were drafted and introduced to produce a financial structure that would be stable. Basically, the cause of the financial collapse was located in the operations of bank securities affiliates that used “other peoples’ money” to speculate in capital markets (often in the shares of the parent firm) and to defraud investors. The regulations produced a system in which commercial banks were forbidden to own or operate any such affiliate dealing in securities, and banks receiving deposits from the public could not use them to finance speculation on price changes in capital markets.

There was no such clarity in GLB, which was primarily concerned with increasing the efficiency of the financial system by creating more competition—a level playing field—in which banks could compete with other financial institutions. This raises the question of what type of system Minsky might have considered an appropriate replacement for Glass-Steagall, which he viewed as outmoded and in need of revision.

Designing the financial system for stability

Minsky considered the following to be the essential functions of the financial system:

- a safe and sound payments system;
- short-term loans to households and firms and, possibly, to state and local government;
- a safe and sound housing finance system;
- a range of financial services, including insurance, brokerage, and retirement savings services;
- long-term funding of positions in expensive capital assets.

There is no economic reason why these services should be provided by a single financial institution or conglomerate. Indeed, the New Deal reforms of the 1930s aimed at preventing this, while the 1999 Financial Services Modernization Act promoted it. However, Minsky recognized that Glass-Steagall had already become anachronistic by the early 1990s. He insisted that any new reforms must take into

account the accelerated innovations in both financial intermediation and the payments mechanism. He believed these changes were largely market driven, and not due to deregulation. To some degree, the 1999 Act codified what had already taken place.

Some of Minsky's recommendations may be discerned in considerations (especially 1992d) of a US Treasury proposal (USDT 1991) for "modernizing" the financial system. The Treasury document made recommendations for "safer, more competitive banks" that included "strengthening" deposit insurance, weakening Glass-Steagall and state limits on branching, allowing corporations to own banks, and consolidating regulatory supervision in the Treasury at the expense of reducing the role of the Fed. Minsky argued that the Treasury proposal was at best superficial because it ignored shadow banks. While he was critical of the approach taken to rescue the FDIC (recall that most thrifts had failed and many of the largest banks were in difficulty as a result of the collapse in real estate investments at the end of the 1980s), he agreed that deposit insurance had to be strengthened. He argued that weakening Glass-Steagall and removing limitations on bank branching represented an attempt to "fix something that is not broke," because small- and medium-size banks are more profitable due to their practice of relationship banking. He saw no reason to allow or promote the rise of hegemonic financial institutions operating in national or international markets and providing a broad scope of financial services. As many others have long argued, the economies of scale associated with banking are achieved at the size of relatively small banks.

Minsky was not swayed by the Treasury's argument that banks were becoming uncompetitive because they could not branch across state lines or because certain practices were prohibited to them. He believed that repealing these constraints would simply reduce the profitability of the smaller, relationship-oriented banks. He recognized that the smaller banks would lose market share anyway, due to competition from shadow banks. Hence, the solution would not be found in promoting bigger, less profitable banks that were not interested in relationship-oriented banking. Rather, Minsky argued in favor of allowing greater scope to the activities of the small community banks. We might call this "intensifying" banking by allowing each small institution to provide a greater range of services, as opposed to promoting branching and the concentration of power in the hands of a few large bank holding companies with a variety of subsidiaries.

Promoting the capital development of the economy

In Minsky's view, capital development of the economy can be "ill done" in two main ways: the "Smithian" way and the "Keynesian way." The first refers to "misallocation": the wrong investments are financed by the financial system. The second refers to an insufficiency of investment, which leads to a level of aggregate demand that is too low to promote high employment. The 1980s suffered from both, but mostly from an inappropriate financing of investment, especially in the boom in commercial real estate investment that left large amounts of uninhabited or partially finished housing and commercial real estate projects. (He also argued that the leveraged-buyout boom of the 1980s was another example of "ill done" finance because it loaded "cash cows" with unserviceable debt.) Minsky would surely have considered the property boom of the 2000s "ill-done," "Smithian" capital development, since far too much finance flowed into the commercial and residential real estate sector.

In the 1980s, the deregulated thrifts, which did not hold mortgages and had practiced lenient underwriting standards, had funding capacity that flowed into commercial real estate; in the 2000s, the reach for yield in the presence of sustained periods of low policy rates led to demand for risky (high-return) asset-backed securities that provided much of the impetus for the development of subprime lending. Minsky argued that the way the mortgages were packaged made it possible to sell off a package of mortgages at a premium and enable the originator and the investment banking firms to walk away from the deal with a net income and no recourse from the holders. The instrument originators and the security underwriters did not hazard any of their wealth on the longer-term viability of the underlying projects. Obviously, in such packaged financing the selection and supervisory functions of lenders and underwriters are not as well done as they might be if the fortunes of the originators were at hazard over the longer term (see Minsky 1992b, 22–23).

The implication for regulation is obvious: good underwriting is promoted when the underwriter is fully exposed to the longer-term risks. Minsky always stressed the importance of the skeptical banker to system stability: “When we go to the theater we enter into a conspiracy with the players to suspend disbelief. The financial developments of the 1980s [and 1990s and 2000s!] can be viewed as theater: promoters and portfolio managers suspended disbelief with respect to where the cash would come from that would [validate] the projects being financed. Bankers, the designated skeptic in the financial structure, placed their critical faculties on hold” (Minsky 1992a, 37). As a result, the capital development was not done well. Decentralization of finance may well be the way to reintroduce the necessary skepticism.

In Minsky’s view, decentralization of lending, plus maintaining the lender’s exposure to risk, could reorient institutions back toward relationship banking. Yet, most regulatory changes introduced in recent years have favored increased concentration. The issues surrounding the response to institutions that are “too big to fail” dates back to the problems created in the 1970s by the rapid expansion of banks such as Continental Illinois, and gives an obvious advantage to the biggest banks. These banks benefit from financing costs below those of smaller institutions because of the implicit guarantee that they will be rescued by government intervention. Small local banks will be subject to higher costs as they attempt to offset this disadvantage by attracting more local deposits, opening more offices than necessary. They will also face higher costs for “wholesale” deposits in national markets. Even in the case of FDIC-insured brokered deposits (which carry no default risk), smaller banks pay more simply because of the market’s perception that they are riskier, since they will be resolved rather than rescued if they face difficulty.

As a result of the Fed’s response to the crisis in 2008, failed institutions were resolved into larger banks, and what were formerly nondeposit-taking investment banks have become financial holding companies that can in principle attract FDIC-insured deposits to finance their operations. A small bank is hard pressed to compete with these large institutions.

How to restore relationship banking

How can the system be reformed to favor smaller, geographically dispersed, relationship banks that seem to be more conducive to promoting the capital development of the economy?

First, it would be useful to reduce government protections for less desirable banking activities. The government currently provides two important kinds of protection: liquidity and solvency. Liquidity is mostly provided by the Fed, which lends reserves at the discount window and buys assets (in the past, these assets were mostly government debt, but in recent years the Fed has bought private debt as well). Refusing to provide liquidity is not the right way to discipline the financial system. Minsky always advocated extending discount window operations to include a wide range of financial institutions. If the Fed had lent reserves without limit to all financial institutions when the crisis first hit, the liquidity crisis probably could have been resolved more quickly. Hence, this kind of government protection should not be restrained.

The second kind of protection, against default, is more problematic. Deposit insurance guarantees full payment on certain classes of deposits—now up to \$250,000. This guarantee is essential for clearing at par and for maintaining a safe and secure payments system. There is no good reason to limit FDIC insurance to \$250,000, so the cap should be lifted. The question is, which types of institutions should be allowed to offer such deposits? Or rather, which types of assets would be eligible for financing using insured deposits? Some considerations would include riskiness of assets, maturity of assets, and whether purchase of the assets fulfills the public purpose: the capital development of the economy. Risky assets put the FDIC on the hook, since it must pay out dollar for dollar; but if the FDIC resolves a failing institution, it receives only cents on each dollar of assets. In his discussion of the Treasury's proposal for rescuing the FDIC, Minsky made clear that "cost to the Treasury" (Minsky 1992d, 6) should not be a major concern (another reason for removing the cap: it is not important to limit the Treasury's losses to the first \$250,000 of a deposit).

For the same reason, while riskiness of assets financed by issuing insured deposits should be a concern, potential losses for the FDIC are not the problem. As Minsky argued, these guarantees are in fact the responsibility of the Federal Reserve, which will always be able to meet them. Further, the maturity of assets is no longer a concern if the Fed stands ready to lend reserves as needed; a bank could always meet deposit withdrawals by borrowing reserves at the discount window, so it would not need to sell longer-term assets. Hence, the major argument for limiting the ability of financial institutions to finance asset positions by issuing insured deposits is that government has a legitimate interest in promoting the public purpose. Banks should be prevented from issuing insured deposits in a manner that causes the capital development of the country to be "ill done."

Banks that receive government protection in the form of liquidity and (partial) solvency guarantees are essentially public-private partnerships. They promote the public purpose by specializing in activities that they can perform more competently than the government can. One of these is underwriting: assessing creditworthiness and building relations with borrowers that enhance their willingness to repay. Over the past decade, a belief that underwriting is unnecessary flowered and then collapsed. Financial institutions discovered that credit-rating scores could not substitute for the due diligence involved in the

credit assessment required for successful underwriting, in part because those scores can be manipulated, but also because the elimination of relationship banking changes the behavior of borrowers and lenders. This means that past default rates become irrelevant to assessing risk (as credit rating agencies seem to have discovered). If banks were not involved in credit assessment and underwriting, why would the government need them as partners? The government could just finance directly those activities that it perceives to be in the public interest: home mortgages, student loans, state and local government infrastructure, and even small-business activities (commercial real estate and working capital expenses). Where underwriting is not seen to fulfill a public purpose, then the government can simply cut out the middleman.

Indeed, this was initially the approach employed for student loans, and it is instructive that it has been restored in the Health Care and Education Reconciliation Act of 2010. When the government guarantees deposits as well as loans (e.g., mortgages and student loans), the banks' role becomes merely to provide underwriting.

Restoring profitability to relationship-based banking

The problem banks have faced over the past three or four decades is the “cream skimming” of their business by uninsured financial institutions—the shadow banks. Uninsured checkable deposits in managed funds, such as money market mutual funds (MMMFs), offered a higher-earning and relatively convenient alternative to insured deposits, allowing much of the payments system to bypass banks. In Minsky's view, credit cards also diverted the payments system away from banking (although the larger banks now dominate the credit card business).

At the same time, banks were squeezed on the other side of their balance sheet by the development of the commercial paper market, which allowed firms to borrow short term at interest rates below those on bank loans (sometimes, firms could even borrow more cheaply than some banks). Larger banks recaptured some of that business in fees earned by providing credit line guarantees for issuers of commercial paper.

But these competitive pressures caused banks to abandon expensive relationship banking in favor of the originate-to-distribute model. There is no simple solution to these competitive pressures, although Minsky offered some ideas. For one, he argued that the payments system should be a profit center for banks: “One weakness of the banking system centers around the American scheme of paying for the payments system by the differential between the return on assets and the interest paid on deposits. In general the administration of the checking system costs some 3.5 percent of the amount of deposits subject to check. If the checking system were an independent profit center for banks, then the banks would be in a better position to compete with the money funds” (Minsky 1992a, 36).

It may not be desirable to return to the conditions of the early postwar period, when banks and thrifts monopolized the payments system; however, in the 1800s the federal government eliminated private banknotes by placing a tax on them. In a similar manner, transaction taxes could be placed on payments made through managed funds, or these funds could be made subject to formal regulation by the Fed

and legal reserve requirements and preferential treatment given to payments made through banks, to restore a competitive edge. In addition, banks could be offered lower, subsidized fees for use of the Fed's clearing system. Minsky (1992d) also held out some hope that by substituting debit cards for checks, banks could substantially lower their costs and increase their profits from operating the payments system, although this seems to have been concentrated more on increasing charges that reducing costs.

Part of the problem today is that the Fed requires that a portion of a bank's funding come from retail deposits. As mentioned above, Minsky believed this causes local banks to incur excessive costs by opening more offices than necessary in order to compete for retail deposits. Part of the reason for the New Deal's Regulation Q was precisely to eliminate competition for such deposits, on the belief that it raised the costs of such funds and allowed large reserve city banks to attract the deposits from smaller rural banks and invest them in stock market speculation rather than leaving them for support of local borrowers.

The biggest "brand name" banks more easily attract retail deposits, and they also have the advantage that they are perceived to be safer. This advantage could be eliminated if banks could fund themselves by borrowing reserves on demand at the Fed, at the Fed's overnight interest rate—plus any "frown costs."² Some, including Minsky's one-time Levy colleague Ronnie Phillips (1995a, 1995b), have called for a return to the 100 percent money proposal of Irving Fisher and Milton Friedman, whereby deposit-issuing banks would be allowed to hold only Fed reserves and Treasury debt as assets. Minsky argued that this proposal loses sight of "the main object: the capital development of the economy. The key role of banking is lending or, better, financing" (Minsky 1992a, 36–37). While he did not reject the narrow bank proposal, he believed that it would deal only with the peripheral problem of the safety and soundness of the payments and savings systems, and could not directly address promotion of the capital development of the economy. However, to the degree that the payments system could be made a profit center, this would help to promote relationship banking.

Alternative funding source for relationship banking

The problem is to separate the use of deposit funds to support the capital development of the economy. Rather than using deposits, banks might simply borrow at the Fed to finance their positions in assets. Recall the Smithian problem and the Keynesian problem: banks might finance the wrong projects, and they might not finance the right amount. Opening the discount window to provide an elastic supply of reserve funding ensures that banks can finance positions in as many assets as they desire at the Fed's target rate. (As discussed above, the Fed would lend reserves on demand and remove financing by means of retail deposits.) This does not guarantee that we have solved the Keynesian problem, since banks might finance too much or too little activity to achieve full employment. Offering banks unlimited funding addresses only the liability side of banking; it leaves the asset side open. It is somewhat easier to resolve the "too much" part of the Keynesian problem: the Fed or another regulator can simply impose

² For this reason, Warren Mosler (2010) has called for the elimination of any requirement that banks maintain a specified proportion of their funding in the form of retail deposits.

constraints on bank purchases of assets when banks are financing too much activity. For example, during the recent real estate boom it was obvious (except, apparently, to mainstream economists and to many at the Fed) that lending should be curtailed.

The problem here is that the orthodox response to too much lending is to raise the federal funds target rate. And because borrowing is not very interest sensitive, especially in a euphoric boom, rates must rise sharply to have much effect. Further, raising rates conflicts with the Fed's goal of maintaining financial stability, since—as the Volcker experiment showed—interest rate hikes that are sufficiently large to kill a boom are also large enough to cause severe financial disruption (something like three-quarters of all thrifts were driven to technical insolvency during the thrift crisis). In fact, Minsky argued that the early 1990s banking crisis was due to the aftermath of the Volcker experiment of a decade earlier. Indeed, this recognition is part of the reason that the Greenspan and Bernanke Fed turned to “gradualism,” a series of very small rate hikes that are well telegraphed. Unfortunately, markets have plenty of time to prepare and to compensate for rate hikes, which means that lending is even less interest sensitive.

For these reasons, rate hikes are not an appropriate means of controlling bank lending. Instead, the controls should be direct: raising down payments and collateral requirements, and even issuing cease-and-desist orders to prevent further financing of some activities. It was generally believed that imposing capital requirements would be a more efficient way to regulate bank lending: higher capital requirements should not only make banks safer but also constrain bank lending, unless the banks can access capital markets to raise more equity capital. Neither claim was correct. Higher capital requirements were imposed in the aftermath of the thrift fiasco, and codified in the Basel agreements. Rather than constraining bank purchases of assets, banks simply moved assets and liabilities off their balance sheets.

Basel also imposed risk-adjusted weightings for capital requirements to encourage banks to hold less risky assets, for which they were rewarded with lower capital requirements. Unfortunately, the regulations had unintended consequences since the banks supported profits by lending in the riskiest positions in each class and worked with investment banks to create credit guarantees that reduced or eliminated capital requirements.

Finally, Minsky (1986) argued that, all else being equal, high capital ratios necessarily reduce the return on equity (and hence, the growth of net worth), so it is not necessarily true that higher capital ratios improve bank safety, since they mean lower profitability. Indeed, with higher capital ratios banks must select a higher risk/return asset portfolio to achieve a targeted return on equity (Tymoigne and Wray 2009). Again, if regulators want to constrain the growth rate of lending, direct credit controls may be more efficient.

Solving the Smithian problem may thus require direct oversight of a bank's activity, mostly on the asset side of its balance sheet. Financial activities that further the capital development of the economy need to be encouraged; those that cause it to be “ill done” need to be discouraged. One of the reasons that Minsky wanted the Fed to lend reserves to all comers was so that private institutions would be “in the

bank”—that is, indebted to the Fed. As a creditor, the Fed would be able to ask the banker the question, How will you repay me?

The Federal Reserve’s powers to examine are inherent in its ability to lend to banks through the discount window. As a lender to banks, either as the normal provider of the reserve base to commercial banks (the normal operation prior to the great depression) or as the potential lender of last resort, central banks have a right to knowledge about the balance sheet, income and competence of their clients, banks and bank managements. This is no more than any bank believes it has the right to know about its clients. (Minsky 1992d, 10)

The Fed would ask to see evidence for the cash flow that would enable the bank to service loans. It is common practice for a central bank to lend against collateral, using a “haircut” to favor certain kinds of assets (e.g., a bank might be able to borrow 100 cents on the dollar against government debt but only 75 cents against a dollar of mortgage debt). Collateral requirements and haircuts can be used to discipline banks—to influence the kinds of assets they purchase.

Examination of a bank’s books also allows the Fed to look for risky practices and keep abreast of developments. The Fed failed to appreciate the risk of the crisis that began in 2007, in part because it generally supplied reserves in open market operations rather than at the discount window. Forcing private banks “into the bank” gave the Fed more leverage over their activities. For this reason, Minsky opposed the Treasury’s proposal to strip the Fed of some of its responsibility for the regulation and oversight of institutions. If anything, he would have increased the Fed’s role, and used the discount window as an important tool for oversight.

Promoting an alternative to megabanks: Community development banks

Minsky worried that the trend toward megabanks “may well allow the weakest part of the system, the giant banks, to expand, not because they are efficient but because they can use the clout of their large asset base and cash flows to make life uncomfortable for local banks: predatory pricing and corners [of the market] cannot be ruled out in the American context” (Minsky 1992d, 12). Further, since the size of loans depends on the capital base, big banks have a natural affinity for the “big deals,” while small banks service smaller clients: “A 1 billion dollar bank may well have 80 million dollars in capital. It therefore would have an 8 to 12 million dollar maximum line of credit. . . . [In the US] context this means the normal client for such banks is a community or smaller business: such banks are small business development corporations” (ibid.).

For this reason, Minsky advocated a proactive government policy to create and support small community development banks (CDBs) (Minsky et al. 1993). Very briefly, the argument advanced was that the capital development of the nation and of communities is fostered via the provision of a broad range of financial services. Unfortunately, many communities, lower-income consumers, and smaller and start-up firms are inadequately provisioned with these services. For example, many communities

host far more check-cashing outlets and pawnshops than bank offices. Many households do not even have access to the transaction system because they do not have a checking account.

Small businesses often finance activities using credit card debt. Indeed, some credit card companies offer special credit card services in support of the financing of small businesses that do not have access to bank lending. Minsky's proposal would create a network of small community development banks to provide a full range of services for underserved communities and small businesses:

- a payment system for check cashing and clearing, and for credit and debit cards;
- secure depositories for savings and transaction balances;
- household financing for housing, consumer debts, and student loans;
- commercial banking services for loans, payroll services, and advice;
- investment banking services for determining the appropriate liability structure for the assets of a firm, and placing those liabilities; and (6) asset management and advice for households. (Minsky et al. 1993, 10–11)

The institutions would be kept small, local, and profitable. They would be public-private partnerships, with a new Federal Bank for Community Development Banks created to provide equity and to charter and supervise the CDBs. Each CDB would be organized as a bank holding company. Such institutions have long been present in Europe, serving special groups such as farmers (Raiffeisen banks), small businessmen (cooperative banks), and local residents (friendly societies). Almost all of these institutions were mutual banks; that is, the depositors and clients of the banks were the owners and beneficiaries.

Promote enterprise and industry over speculation

Over past decades, the belief that “markets work to promote the public interest” gained in popularity. Minsky was skeptical. He believed that it was necessary to make “industry” more important than “speculation.”³ If investment is misdirected, we not only waste resources but also get a boom-and-bust trajectory. If investment is too low, we not only suffer from unemployment but also achieve profits too low to support commitments, leading to default. Further, when profits are low in “industry,” problems arise in the financial sector, since commitments cannot be met. In that case, individual profit-seeking behavior leads to incoherent results, as financial markets, labor markets, and goods markets all react in a manner that causes wages and prices to fall, generating a debt deflation. Unfortunately, things are not better when investment is too high: it generates increased layering of financial commitments and high profits that reward unnecessary innovation, leading to greater risk taking and eventually producing a financial structure that is too fragile. As Minsky always argued, the really dangerous instability in a

³ Echoing Keynes (1936), “The position becomes serious when enterprise becomes the bubble on a whirlpool of speculation” (chap. 12, 159).

capitalist economy is in the upward direction—toward a boom. That is what makes a debt deflation possible, as asset prices become overvalued and too much unserviceable debt is issued.

Minsky's comprehensive stability policy

Although Minsky is best known for his analysis of financial instability and his recommendations for central bank reform (to have the central bank focus on financial stability and limit its interventions in areas best left to fiscal policy: controlling the level of economic activity and, in particular, the level of goods prices), he believed that financial stability would require more comprehensive policy reforms. “An inappropriate financing of investment and capital asset ownership are the major destabilizing influences in a capitalist economy. Thus, the substitution of employment for investment as the proximate objective of economic policy is a precondition for financial reforms aimed at decreasing instability.” “The emphasis on investment and ‘economic growth’ rather than on employment as a policy objective is a mistake. A full-employment economy is bound to expand, whereas an economy that aims at accelerating growth through devices that induce capital-intensive private investment not only may not grow, but may be increasingly inequitable in its income distribution, inefficient in its choices of techniques, and unstable in its overall performance” (Minsky 2008 [1986], 350).

For Minsky, support of employment could be best secured through a direct Government Employment Guarantee Program in which the government offered employment to all those willing and able to work at a wage near the prevailing minimum. The idea was to support the cash flows that validate assets through actual sales rather than through increasing borrowing or increasing prices. The Levy Institute has continued to pursue this particular line of research (see under Related Levy Institute Publications below: November 2011 Research Project Report, Policy Note 2012/2, Public Policy Brief No. 120, and Working Papers Nos. 649, 650, 653, 655, 659, 681, 706, and 707).

When faced with the current crisis, largely driven by household borrowing to support consumption spending, Minsky would certainly have replied that if consumption had been financed by wages increasing in step with productivity rather than being transferred to the financial sector, much of the crisis could have been avoided. Consumer debt would have been lower, and if banks had transferred their higher earnings to their reserves rather than paying large bonuses, their capital structure would have been more solid. For Minsky, the impact of the financial instability of income distribution would have been a major factor.

Finally, Minsky was also a firm believer in Abba Lerner's concept of “functional finance”—that is, that the government budget should have full employment rather than balance as its objective. The budget balance, surplus, or deficit becomes largely irrelevant once the impact of government spending on private sector budget balances and on its ability to meet its financial commitments is recognized. Thus, Minsky would have much preferred that the recent increase in budget expenditures were directed first to households facing reduced incomes and an impaired ability to meet their mortgage commitments, rather than directly to the banks to remove the impaired mortgages from their balance sheets. But this simple approach reflects his basic belief that both the government and the financial system exist to serve the private citizen, and not vice versa.

CHAPTER 3. Regulation in the Midst of the Crisis

One of the little-noticed aspects of the crisis is that it involved a progressive regulatory response as it evolved from disruption in the subprime market to the full-scale meltdown and virtual insolvency of the entire financial system. The evolution of the crisis and its corresponding regulatory reactions took place in stages, interspersed with what appeared to be the system's return to normalcy. Three stages can be discerned: (1) regulation and supervision, (2) securitization, and (3) a run on investment banks. Each stage can be associated with a particular failure of regulatory supervision. It thus became possible to argue at each stage that all that was necessary was the appropriate application of existing regulations, and that nothing more needed to be done. This scenario progressed until the collapse of Lehman Brothers brought about a full-scale recession and attention turned to support of the real economy and employment, leaving more fundamental financial reregulation in the background until the Dodd-Frank Act (see chapter 4). This chapter focuses on the more immediate regulatory and policy reactions to the crisis.

After the 2006 reversal of house price increases and the trigger of interest rate adjustments included in option mortgages, increasing default rates led to the insolvency of large mortgage originators such as New Century and Countrywide. As a result, in the spring of 2007 market attention was focused on the regulations governing mortgage lending. This was the stage in which the crisis was considered to have been "contained." Losses were "contained" in the sense that they were primarily absorbed by the households who could no longer meet their payments on nontraditional mortgages. The bankruptcy judge dealing with New Century recommended that management be tried for fraud and required to repay bonuses that had been paid against fictitious profits generated by inaccurate and probably fraudulent bookkeeping practices. In December, the Securities and Exchange Commission (SEC) announced that it would press charges against three members of the firm's top management. The Fed eventually responded by amending Regulation Z (Truth in Lending) under the Home Ownership and Equity Protection Act (HOEPA) in July 2008.

Long before the Fed moved to act, the impact of mortgage defaults had reduced the value of the mortgages contained in the securitized assets that had been originated by banks. This caused losses in the securitized structures and directed attention to the monoline insurers and the contingent liquidity guarantees, credit default swaps, and other OTC derivative contracts that were supposed to cover these losses. As many banks had also provided similar guarantees, the losses meant they had to be recognized on their balance sheets and charged against the banks' capital base under existing capital adequacy requirements. In response to these losses, banks were able to issue new equity to raise additional capital to cover losses, and the view prevailed that the crisis had been overcome. This was reinforced by the Fed-engineered rescue of Bear Stearns via a pass-through loan from JPMorgan Chase. This support was eventually institutionalized in a special Federal Reserve Primary Dealer Credit Facility that was extended to all US government securities dealers, and then supplemented by the Term Securities Lending Facility for primary dealers.

Finally, in September 2008, the insolvency of Lehman Brothers's mortgage and real estate units produced a complete collapse of short-term money markets, including MMMFs. This time, the problem facing the system was considered to be liquidity, not capitalization, and the response was a full FDIC guarantee of virtually all short-term liabilities of financial institutions in the system, the opening of the discount window to all private sector business, and a decision allowing virtually all assets to serve as collateral. The aim was to avoid an old-style deposit run on financial institutions. The Fed allowed its balance sheet to expand to absorb the financial assets that the private sector was no longer willing to hold. As Richard Kahn had pointed out long ago, it is the role of the banking system to hold the assets that the public chooses not to hold, and it is the role of the central bank to hold the assets that the private financial system chooses not to hold. The Fed thus liquefied the portfolio holdings of the private sector by providing reserves in exchange. For the banks, this involved expansion of their reserve account balances and, in addition, the Fed started to offer interest on the gross reserve positions of the banks in order to increase the liquidity of interbank lending (see Kregel 2008b).

The difficulty with this response to the crisis is that the agencies in charge of oversight were continually reacting to a particular failure of the existing system and attempting to provide changes in regulation to restore the normal functioning of the particular sector thought to have been the source of the problem. If that problem was subprime mortgages, the thinking went, then introduce regulations to deal with the problems created by subprime mortgages; if the problem was capital adequacy, revise the capital adequacy regulations; if the problem was insufficient liquidity, introduce more stringent liquidity requirements. But if the "normal" functioning of the system is the problem, then simple repair will never produce reregulation of the system.

Stage one: Regulation and supervision of mortgage lending

While it has been argued that mortgage lending was subject to lax regulation, this is not precisely true. It would be more accurate to say that existing regulations were not applied and that supervision was lax by design rather than by oversight. According to the Mortgage Brokers Association, "Mortgage brokers are regulated by more than ten federal laws, five federal enforcement agencies and at least forty-nine state regulation and licensing statutes. Moreover, mortgage brokers, who typically operate as small business owners, must also comply with a number of laws and regulations governing the conduct of commercial activity within the states" (Dinham 2006).⁴

⁴ "Mortgage brokers are governed by a host of federal laws and regulations. For example, mortgage brokers must comply with: the Real Estate Settlement Procedures Act (RESPA), the Truth in Lending Act (TILA), the Home Ownership and Equity Protection Act (HOEPA), the Fair Credit Reporting Act (FCRA), the Equal Credit Opportunity Act (ECOA), the Gramm-Leach-Bliley (GLB) Act, and the Federal Trade Commission Act (FTC Act), as well as fair lending and fair housing laws. . . . Additionally, mortgage brokers are under the oversight of the Department of Housing and Urban Development (HUD) and the Federal Trade Commission (FTC); and to the extent their promulgated laws apply to mortgage brokers, the Federal Reserve Board, the Internal Revenue Service, and the Department of Labor" (Dinham 2006).

In addition,

Mortgage brokers are licensed or registered and must comply with prelicensure and continuing education requirements and criminal background checks in forty-nine states and the District of Columbia. Additionally, over half of these states require not only mortgage broker licensure, but the licensure or registration of brokers' individual loan officers as well. An increasing number of states are requiring these originators to pass tests in order to become licensed. (Dinham 2006)

However,

The same is not true for the thousands of loan officers employed by mortgage bankers and other lenders, who are exempt in most states from loan officer licensing statutes. While the Office of the Comptroller of the Currency exempts depository institutions from state licensing requirements, the states continue to increase their regulation of mortgage brokers and their individual loan officers. Many states also exempt lenders from licensing if they are approved by Fannie Mae or HUD, which subjects those lenders and their employees to significantly less regulation than most mortgage brokers. As small businessmen and women, mortgage brokers must also comply with numerous predatory lending and consumer protection laws, regulations and ordinances (i.e., UDAP laws). Again, this is not true for a great number of depository banks, mortgage bankers, mortgage lenders and their employed loan officers, which remain exempt due to federal agency preemption. Many states also subject mortgage brokers to oversight, audit and/or investigation by mortgage regulators, the state's attorney general, or another state agency, and in some instances all three. (Dinham 2006)

Consumer protection organizations have provided extensive evidence concerning the failure of regulatory agencies to apply existing regulations (see Center for Responsible Lending 2009). Even before the introduction of the GLB Act in 1999, bank holding companies had opened mortgage affiliates, or purchased independent consumer finance companies that had entered the market for subprime mortgages. Even though the Fed was granted responsibility for the supervision of bank holding companies, it decided that these affiliates would not be supervised for compliance with federal laws protecting borrowers since they had not been previously subject to regulation. In January 1998, the Board of Governors of the Federal Reserve System unanimously decided to formalize a long-standing practice to not routinely conduct "consumer compliance examinations of nonbank subsidiaries of bank holding companies" or investigate "consumer complaints relating to these subsidiaries" (FRB 1998). This decision was then applied to any nonbank financial institution that became the affiliate of a bank holding company. A 1999 report by the General Accounting Office (GAO) warned that the Fed's decision created "a lack of regulatory oversight," because the Fed alone was in a position to supervise the affiliates. Its role as regulator of bank holding companies was strengthened in GLB, but was only exercised for mortgages originated through the banking affiliate of the holding company.

Thus, just as banks were moving their capital exposure to mortgage lending off balance sheet through the creation of SPEs, they moved these activities outside the purview of regulators by creating and acquiring mortgage affiliates that were technically regulated, but had been declared outside the purview of Fed supervision. As a result, around 13 percent of the national total of subprime loans made between 2004 and 2007 by bank affiliates were de facto unregulated, even though the Federal Reserve had de jure power to do so. A 2000 joint report on predatory lending by the Treasury Department and the Department of Housing and Urban Development had noted the failure of the Fed to use its authority to investigate evidence of abusive lending practices and urged a policy of targeted examinations, long before the current abuses commenced (USDT and HUD 2000).

Stage two: Mortgage securitization

Although home prices had stopped rising in many areas by early to mid 2006, and defaults and foreclosures had reached a sufficient level to cause distress and eventual bankruptcy for some of the larger mortgage originators (such as New Century) in the first quarter of 2007, it was only the discovery of the contingent liabilities that many large financial holding companies had issued to “arms-length” SIVs that ushered in the second phase of the mortgage crisis. It is interesting that at this stage the viability of the securitized subprime loan vehicles, their triple-A credit ratings, and the role of monoline insurers and credit default swaps in supporting those ratings had yet to fully appear. Rather, it was the absence of variable-interest SIVs on the reported balance sheets of banks and the regulations that governed their accounting procedures. These entities were the result of two trends in the financial markets of the 1980s that broke the barriers between fixed-interest securities and equities through the invention of the junk bond.

In 1998, two Citibank employees, Stephen Partridge-Hicks and Nicholas Sossidis, set up a fund that would issue short-term commercial paper and medium-term notes to investors and then use the money to buy the higher-yielding, longer-term CDOs of commercial real estate or credit card receivables that were just being perfected. The fund’s assets would belong to the holders of the medium-term notes, who would be responsible for the fund’s debt if the commercial paper funding dissolved. The assets would thus stay off the bank’s balance sheet but would generate fees by originating the assets and organizing and servicing what was to become the model for the SIV and a major destination for bank-securitized subprime loans.

The second element that supported the use of SIVs was the regulatory response to the use of off-balance-sheet entities after the Enron bankruptcy. Enron had used these SPEs, created by its investment bankers, for a different purpose: the generation of income from fictitious sales that allowed the company to manipulate its reported earnings figures and, thus, its stock price. For banks, on the other hand, the advantage in this procedure lay in the ability to remove the assets sold to these entities from their consolidated reporting, thereby reducing or eliminating the amount of regulatory capital that had to be held against them. The regulatory adjustment to accounting requirements for off-balance-sheet entities were thus driven by different needs and to eliminate a different problem than was at issue at Enron. The resulting changes provided substantial support for the use of such entities by banks after the new regulations were introduced in 2002.

The US Accounting Standards Board restricted the use of off-balance-sheet accounting in the wake of Enron. The original rules had been based on the share of equity ownership in the entity. The share at which consolidation would be required was set by interpretation at 3 percent of total equity. Thus, Enron was not required to consolidate any special entity in which it had less than 97 percent of the equity ownership. The problems at Enron were created by the fact that its employees were providing the 3 percent with funds lent to them *by Enron*.

The new Financial Accounting Standards Board (FASB) accounting rules moved away from a simple share of owners' equity and concentrated on effective control through the ability to influence the daily operations of the company and the assignment of loss if there were a decline in asset values. This revision created the category of "variable interest entity," or VIE, as the post-Enron version of the SPE that had led to that company's demise. The SIV created by the Citibankers provided a perfect example of a qualifying VIE, since the originating bank had no equity interest; nor did it bear the first risk of loss if the commercial paper could not be rolled over and the assets sold at a loss. They thus became a repository for the triple-A tranches of the securitized subprime mortgage obligations, but they were not reported on any major bank's consolidated balance sheet; nor did the assets require provision of bank capital.

When troubles with subprime mortgage loans became an issue for bank solvency in the summer of 2007, SIVs didn't appear to be affected because it was thought that few had invested in collateralized assets that contained subprime loans. In July, Moody's Investors Service considered SIVs "an oasis of calm in the subprime maelstrom" (Shenn 2007). However, by late July, a bank affiliate set up by German bank IKB Deutsche Industriebank reported funding difficulties, and in August, Cheyne Finance (a \$6.6 billion SIV operated by a London hedge fund) began liquidating assets to repay debts. On September 6, Citibank announced that its SIVs had little subprime exposure, but that it was also selling assets.

Thus, the subprime mortgage lending carried out by a large bank holding company could escape supervision if it took place in a mortgage affiliate. The mortgages the affiliate generated could escape market scrutiny if they were packaged into CMOs that were sold to SIVs that were not subject to supervision of capital adequacy and were regulated, if at all, under the SEC section 144a private placement exemption. Sales of such assets are considered private transactions, whose contents and details need only be provided to the restricted, qualified, professional high-net-worth investors in such securities.

Again, there was no lack of formal regulation. Indeed, the SIVs were made possible by reregulation that was supposed to prevent the kind of abuse of off-balance-sheet entities that had occurred under Enron. Many banks had written liquidity puts, similar to backup lines of credit, to the issue of commercial paper by a private company that required the banks to cover the difference between the liquidation value of the subprime CMOs and the commercial paper falling due. When the implications of these contracts were made public, the response was a US Treasury proposal to create a rescue entity funded by private banks, similar to that created for the Long-Term Capital Management resolution, to absorb the assets and prevent their sale while urging banks to recapitalize in order to cover any potential losses. At this stage, many large banks sought capital injections from sovereign wealth funds or wealthy individual

investors such as Middle Eastern oil sheiks and Warren Buffet. In the end, many banks simply took the assets back onto their balance sheets, given that most still carried triple-A ratings. Again, the response was to provide a remedy that reinforced the application of existing regulations and repaired the damage from faulty application by replenishing bank capital. The discussion focused on the active or passive ability of the originating bank to influence day-to-day operations, and on requiring an ongoing assessment of the classification of variable interest entities when the risk exposure of the bank changes over time. Basically, the solution was simply seen as providing enough capital to allow the banks to take the assets back on their balance sheets and meet residual losses due to the relatively small proportion of subprime mortgages involved.

Thus, by late 2007 – early 2008, it was again believed that the subprime exposure problem was well contained—well contained because it was believed that the system would now revert to normal, having taken care of the subprime mortgage difficulties and the off-balance-sheet affiliates. The stage was set for the third phase of the crisis, which began in March with the collapse of Bear Stearns and ended with the bankruptcy of Lehman in September, bringing the entire financial system to a halt.

Stage three: A run on investment banks

The third stage of the crisis occurred not in the traditional fashion of a deposit run (although there were lines of depositors seeking to remove their funds from Northern Rock in the United Kingdom). Rather, it occurred in the investment banking sector, the sector that is supposed to be either immune to such panics or, if it does experience difficulty, able to resolve bankruptcy without disrupting the payments system. The application of mark-to-market accounting has played a substantial role in the discussions of the evolution of the crisis. Its genesis, however, provides a clue to the problems that were faced in this stage.

Mark-to-market accounting was originally applied by the SEC in assessing capital requirements for broker-dealer investment banks. The idea was that a broker-dealer would, in general, finance its inventory with short-term funding. The classic case in the pre-GLB world was the specialist on the New York Stock Exchange who financed inventory of stock by using it as collateral for call money borrowed from an insured, deposit-taking New York bank. Since funding had to be renewed daily (or, indeed, on “call” by the lender), the collateral had to be repriced (marked to market) every day to ensure that its value was sufficient to repay the borrowing from the banks. The capital requirement was the equivalent of the haircut on the value of the securities—the margin of error—to ensure that the broker-dealer was truly solvent and could meet all of its short-term obligations. The viability of any investment bank thus depended on the value of its inventory of assets and its ability to refinance those assets on a more or less continuous short-term basis. We have already seen how in the second stage of the crisis doubts over the value of the assets held by SIVs led to difficulty in refinancing via the failure of investors to roll over their asset-backed commercial paper. That experience led to doubts about the ability of commercial banks to meet their lending commitments in support of subprime mortgage assets, but the entire financial system was operating on the same basis of borrowing short-term funds to finance the origination, underwriting, and, subsequently, open positions in mortgage assets.

One of the main characteristics of the deregulation that brought about the erosion of the section 20 restrictions on bank activities was the creation of the securities repurchase (or “repo”) market in which banks would lend against collateral, initially government securities. This meant that an uninsured financial institution could finance its assets holdings through a repurchase agreement with an insured commercial bank. In this arrangement, the bank was lending short term to finance speculative holdings of government and other securities. Eventually, investment banks learned that they could lend to their clients, such as hedge funds, to support their speculative positions by lending the securities of the hedge funds they held as collateral—a procedure known as rehypothecation.

It was thus possible for a hedge fund to attain leverage ratios of 20 to 40 times its capital by borrowing from an investment bank using the securities it was speculating on as collateral, with the investment bank then raising the funds it lent to the hedge fund by using the securities as collateral for a repo from an insured bank that was itself leveraging by a similar amount using the securities held as collateral for the hedge fund client. In this relationship between the hedge fund and its banker, called a prime brokerage account, the investment bank not only provided the hedge fund with leveraged funding for its investments but also handled the execution of its trades and other technical and administrative services, all of which earned fee and commission income for the bank. The main point is that an increasingly long chain of short-term lending or financial layering was supporting speculative positions in long-term assets with increasing leverage. At the basis of the system was a deposit-taking bank affiliate of a financial holding company. The subprime mortgage obligations that were being funded were also serving as collateral. This system would have been extremely fragile and subject to collapse even if the mortgage assets had been perfectly sound—which they were not.

Indeed, the problems on the asset side went beyond the increasing number of defaults due to the onerous terms and fraudulent mortgage origination activity. A collateralized obligation is not a standard security; that is, the liability of a chartered private corporation. Rather, it is an independent financial institution, usually a trust, and it issues securities whose credit rating is determined by the structure of the liabilities and the owners’ equity. This “owners’ equity” was the medium-term note in the SIV. In a CMO it is the equity tranche (usually no more than 4 or 5 percent of the total asset value) that is usually supplemented by a guarantee given by a monoline insurer who has far less than 1 percent of assets against its liabilities, or by a CDS written by another bank or by, say, American International Group (AIG), in which case the reserve was nonexistent. The triple-A credit ratings that were given to 90 to 95 percent of the value of the assets issued as securities were thus the equivalent of being reserved by short-term money. Borrowing by the insurers would be required to meet the guarantees. Therefore, there was leverage on both sides of the balance sheets of financial institutions—their assets were leveraged and their liabilities were leveraged.

When questions were raised, first about Lehman and then about AIG, it was as if the short-term loans and margin guarantees were called on both sides of the balance sheet and the result was the equivalent of a bank run, not on deposit bank subsidiaries, but on the nondeposit-taking investment banks providing prime brokerage services. Since the deposit banks were already facing capital constraints due to their own SIVs, they could not provide funding to meet the margin calls, and had to borrow from other investment banks to do so. However, all financial institutions were seeking alternative funding for

their asset holdings, as were the insurers. Hedge funds, fearing loss of their assets held in prime brokerage accounts, sought assurance of the solvency of their prime brokers, and started to withdraw their funds from Goldman Sachs and Morgan Stanley. Faced with the impossibility of returning the cash and assets in the accounts (since they were pledged as repo collateral or lent via rehypothecation to other institutions) the only alternative would have been to attempt to raise cash by selling assets in conditions in which there were no buyers. This would have led to zero prices and the application of mark-to-market in these conditions would have clearly led to insolvency of the entire system.

While much has been written about the difficulty of identifying net credit exposures due to the use of CDSs, the real complexity and layering in the system derives from the existence of securities lending, repo financing, and rehypothecation. If all lenders had sought to close their positions, the only alternative would have been to attempt to raise cash by selling assets in conditions in which there were no buyers. This would have led to zero prices, and the application of mark-to-market in these conditions would have clearly led to insolvency of the entire system.

It was at this stage that the Treasury and the Fed decided that a systemic solution was required to support asset prices; this was achieved through the request to Congress for Troubled Asset Relief Program (TARP) funding and the Fed decision to lend to any and all institutions to allow them to meet short-term funding requirements. It handsomely proved Minsky's rule that the stability of an institution depends only on the liquidity of its cushion of safety, and in the absence of a cash cushion, its ability to sell assets for cash that only the Fed can provide in unlimited amounts.

It is perhaps paradoxical that there was no absence of regulations governing the financial institutions that engaged in the buildup of financial layering and pyramiding on an ever-declining cushion of safety. The response was to try to improve and better apply those regulations while implementing short-term liquidity measures to stabilize asset values. The fundamental problem was believed to have been the collapse in asset prices created by the disappearance of market liquidity, rather than any inherent problem with the assets themselves. However, if the assets are insolvent, as are the institutions that hold them, this approach cannot provide for the recovery of the system. The failure to recognize this fact has been at the root of the failure to provide any meaningful systemic reform. As long as the policy is to provide sufficient liquidity in the hope that asset prices will return to levels that allow banks to remain solvent with appropriate capital injections to offset losses, there can and will be no meaningful reform or regulation of the financial system.

CHAPTER 4. Reregulation without Reform of the Financial Structure: Dodd-Frank

The two major pillars of the 2010 Dodd-Frank Act are regulations to better manage the risks undertaken by large, “systemically significant” financial institutions, and the means to force them into bankruptcy liquidation without the need for anything but temporary public assistance. Dodd-Frank thus suggests a particular view of the central weakness of the US financial structure: not the size and integration of multifunction institutions, but the absence of a mechanism to allow all bank and nonbank financial institutions to fail without public assistance. Under Dodd-Frank, banks will be allowed to function more or less as before the crisis (with the exception ever-weakening “Volcker rule” restrictions) but to be subject to clear rules on their rapid dissolution rather than their resolution.

A Minskyan analysis of Dodd-Frank, motivated by the idea that disruption is a natural consequence of the operation of the financial system, would suggest that regulators should be concerned both with the size of banks and with their operations as multifunction financial service providers. Financial innovation will always be driven by regulatory arbitrage, and as a result there can be no assurance that regulations of the sort contained in Dodd-Frank can make large financial institutions safe from crisis.

The Financial Stability Oversight Council

One of the centerpieces of the Dodd-Frank legislation is the creation of the Financial Stability Oversight Council (FSOC). It has the objective of providing collective accountability for identifying risks and responding to emerging threats to financial stability. To help minimize the risk of a nonbank financial firm threatening the stability of the financial system, the FSOC has the mandate and authority to identify all systemically important institutions, both financial and nonfinancial, that contribute excessive risk to the operation of the financial system. It also has the ability to apply regulations in addition to those stipulated by their applicable regulatory agency. The FSOC is mandated to identify emerging risks to financial stability via requests for data and analyses from the Office of Financial Research, which was also created by the Act, and to formulate and compile databases of financial information from all market participants to aid in the identification of unstable financial practices and conditions.

The idea of identifying specific institutions as systemically significant ignores Minsky’s explanation of the endogenous creation of systemic risk—namely, that it is not specific to institutions, but rather is the result of how the system evolves over time and how its structure changes in response to regulation and innovation. The real problem is to identify the endogenous accretion of fragile financing structures, and to recognize their potential impact on systemic stability.

The Volcker rule

Most of the regulatory actions in the Dodd-Frank Act call for measures to correct difficulties that have emerged from the multifunction banking that was permitted by Gramm-Leach-Bliley. The FSOC is responsible for implementing the most important of these measures, the so-called “Volcker rule” provisions set out in section 619 of the Act that call for limitations on the use of proprietary funds for

financial speculation by banking entities that benefit from federal insurance, or any explicit or implicit government guarantees. The separation of the use of depositors' funds for bank business-lending operations and the use of deposits for any operations in securities markets except those provided as a complement to client services was the fulcrum of the Glass-Steagall regulations. The intention was to prevent banks from using retail deposit funds, guaranteed by the new government deposit insurance fund, for speculative trading. Such activity was to be limited to noninsured investment banks whose partners used their own capital resources to generate income by underwriting and trading in securities. In the 1980s, most investment banks were transformed into limited-liability corporations and eventually became bank holding companies, eliminating the relation between the kind of investment activity (commercial loans or securities) and the kind of funding (deposits or own capital) in distinct types of financial institution (commercial or investment banks).

Since it is no longer possible under the 1999 Act to separate the use of deposit funds from the proprietary trading financed by bank capital, such trading can produce losses that jeopardize the bank's ability to repay depositors, and would thus require the FDIC to meet the losses created by trading risks that were undertaken and should be borne by the bank's owners and managers. The Volcker rule thus seeks to preclude the use of the capital of the financial institution for the purposes of proprietary trading—that is, trading in which the bank acts as principal—if the bank qualifies for any government support for losses to its depositors. The intention of the rule is to prevent banks from using any of its deposits or capital funds to take leveraged risks on positions whose value is determined by changes in the price of financial assets, and, in particular, to limit the use of leverage that has been a traditional part of such activities. In general, the leverage that is associated with speculative and arbitrage activities is in noninsured areas such as repo markets and other commercial borrowing, so the rule implicitly seeks to limit the leverage that can be generated by funding proprietary trading in repo markets or in undermargined or nonmargined OTC derivatives structures.

Since the rule would exclude bank activities that provide services to clients, there is also difficulty in determining when such precluded activities are required for supporting client requests for services and when they are simply for the bank's own activities. For example, a bank providing foreign exchange or interest rate hedging services may find it necessary to warehouse such contracts in order to provide the best execution for clients, and it would be difficult to differentiate such activities from pure proprietary speculation. All these difficulties were avoided under Glass-Steagall's simple proscription on securities trading by insured deposit-taking banks. The difficulties in the interpretation of the Volcker rule would thus seem to stem from an attempt to reintroduce Glass-Steagall separation of activities within the Gramm-Leach-Bliley Act in which they are permitted.

Some of the difficulties raised by the Volcker rule are dealt with in another of the major areas of Dodd-Frank regulation: the ability of banks to operate and act as dealers in derivative contracts, and the formal transfer of derivatives clearing and trading to regulated market institutions. The former deals with the so-called "Lincoln amendment" that sought to prohibit banks active in the swaps markets from receiving various forms of "federal assistance," including federal deposit insurance and access to the Fed discount window or any Fed credit facility. However, the amendment also created difficulties due to the

retention of existing Gramm-Leach-Bliley legislation and emerged with a “push-out” provision that allowed insured entities to continue their derivatives activities under certain conditions.

The regulation forbids federal assistance for a generic category, “swaps entities,” that is defined as “any swap dealer, security-based swap dealer, major swap participant, [or] major security-based swap participant.” In turn, swap dealers and security-based swap dealers are persons or entities that hold themselves out as swap dealers, make markets in swaps, regularly enter into swaps with counterparties as an ordinary course of business for their own accounts, or engage in any activity causing them to be commonly known in the industry as swap dealers or market makers. However, even if an entity is not classified as a “swaps dealer,” it may nonetheless be classified as a “major swap participant” or “major security-based swap participant” and subject to the regulation if it maintains “substantial positions” in swaps, or if it possesses outstanding swaps that create substantial counterparty exposure that could have serious adverse effects on the financial stability of the US banking system or financial markets.

Since this provision, which is to come into effect in July 2012, would create substantial difficulties for banks in providing derivatives-based client services, or in using such instruments to hedge their own risks via the use of derivative contracts, the push-out provision would allow banks to retain Federal insurance and support if their swap activities are carried out through an affiliate. The insured entities could then directly engage in their own and certain client-based hedging activities without being classified as swap dealers. The affiliates may be created by any depository institution that is part of either a bank holding company or a savings-and-loan holding company, on condition that the affiliate complies with sections 23A and 23B of the Federal Reserve Act and any other requirements that the Commodity Futures Trading Commission (CFTC), SEC, and Fed may determine necessary. In effect, this is the equivalent of the section 20 exemption under Glass-Steagall that permitted commercial banks limited securities-market activities.

The activities that can be engaged in by the insured entity itself include acting as principal in swaps with customers in connection with originating loans for those customers; engaging in “de minimis” swaps dealing; entering swap agreements for the purposes of “hedging and other similar risk mitigating activities directly related to the insured depository institution’s activities”; and acting as swaps entities for activities involving rates or reference assets that are permissible for investment by a national bank. Again, these mirror exemptions that had already been approved under Glass-Steagall and did much to undermine its application. Regulations specifying the formal content of these limits and definition are to be formulated by the SEC and CFTC as appropriate.

Swaps and futures regulation

These exemptions do not, however, apply to CDSs unless they are cleared through derivatives-clearing regulations that are called for under the Act. The financial industry fought hard to limit reforms on the trading of CDSs to the requirement that they be cleared, arguing that this would be sufficient to ensure safety. However, Michael Greenberger (2010) has argued that, while clearing regulations would help to ensure capital adequacy of trading partners, this alone is not sufficient protection. For example, Greenberger states that the following regulations are necessary as well: transparency of pricing and of

the trading party identities, prudential and competency regulation of intermediaries, adequate self-regulation by the industry to help regulators, complete record keeping, prohibitions on fraud and manipulation, full disclosure to regulators and counterparties, and competent private enforcement. This would create a structure similar to stock market rules, regulations, and operating procedures. Exchange trading, strict antifraud requirements that are enforced by state and federal governments, and bans on “abusive” CDSs that are designed to cause economic injury (through bankruptcy) were seen to be needed to prevent a repeat of the problems that led up to the crisis.

The full implementation of the Volcker and Lincoln amendments requires provisions to shift OTC trading in derivatives onto federally mandated clearing mechanisms and regulated markets. The Act thus calls for the creation of a comprehensive framework for the regulation, clearing, and exchange trading of OTC derivatives. Now defined as “swap” contracts, federal legislation has always excluded them from similar formal regulations that originated in the initial regulation of futures contracts in 1922. This is due in part to the fact that futures contracts were initially developed in the agricultural sector and thus were subject to commodity futures trading regulation monitored by the CFTC, while other derivatives contracts were primarily financial and therefore under the regulatory rubric of the SEC. Thus, although futures contracts, whether of a financial or a commodity nature, could not be legally traded outside of a formally regulated market without a specific exemption, other derivatives were always fully exempt and therefore developed in the OTC market. The current regulation thus seeks to apply the exchange and clearing regulations of futures to virtually all standardized swap contracts.

While swaps and futures represent similar “time” contracts, swaps, unlike futures, were customized to the specific commercial hedging needs of businesses and financial institutions; and, as noted, financial institutions initially acted as intermediaries bringing together swap counterparties in private bilateral negotiations. Since most of these contracts were negotiated without exchange of principal, risk exposure was limited to marginal changes in the market price of the contracts and prescriptive regulation was not considered necessary. As banks began to take on principal positions as counterparties to client requests, they also accepted risk on the nonperformance of counterparties, but this was also considered minimal. The most popular swaps contracts were interest rate and Forex swaps, which were generated by the breakdown of the Bretton Woods system of fixed exchange rates and have since become an integral part of the hedging in the flexible interest and exchange rates in the international financial system. As they increased in volume, the International Swaps and Derivatives Association provided standardized terms and documentation, reducing the need for specific conditions and bilateral negotiation.

The definition of swaps in the Act covers most commonly traded OTC derivatives, including options on interest rates, currencies, commodities, securities, indices, and various other financial or economic interests or property; contracts in which payments and deliveries are dependent on the occurrence or nonoccurrence of certain contingencies (e.g., a credit default swap); and swaps on rates and currencies, total return swaps, and various other common swap transactions.

Due to the parallel development of commodity-based and financial-based contracts, the Act defines and provides for a common approach to “security-based swaps,” which are generally swap transactions

involving a single security or loan, or a narrow-based security index. In broad terms, these will be regulated by the SEC and “commodity swaps” will be regulated by the CFTC, preserving the historical division of labor between the two agencies.

Another high-volume area of the market that could be considered a prime example of contracts that might benefit from regulated market trading are foreign exchange swaps and forward contracts. These contracts are primarily the domain of banks and are currently exempt from regulatory oversight. They will be subject to regulation under Dodd-Frank. However, given the major participation of banks in providing client services and the traditional absence of regulation since the breakdown of the Bretton Woods system, the Act provides the Treasury secretary with the power to exclude them from regulation if the contracts negotiated have not been structured to evade the reach of the legislation.

Banks, dealers, and other financial institutions active in the derivatives markets may be classified as “(security) swap dealers”—that is, any person who holds himself out as a dealer in swaps, makes a market in swaps, regularly enters into swaps with counterparties as an ordinary course of business for his own account, or engages in any activity causing him to be commonly known in the trade as a dealer or market maker in swaps—and will become subject to registration and record-keeping requirements.

Given the prominent role in providing client services, a number of institutions will be exempt from classification as (security) swap dealers: an insured depository institution, to the extent it offers to enter into a swap with a customer in connection with originating a loan with that customer; an entity that buys or sells swaps for such person’s own account, either individually or in a fiduciary capacity, and not as “part of a regular business”; and an entity that engages in a “de minimis quantity” of swap dealing in connection with transactions with or on behalf of its customers.

The major obligation of swap dealers will be the application of minimum capital standards and initial and variation margin requirements for swaps that are not cleared as required by the appropriate prudential regulatory agency or commission.

Dealing with insolvent institutions

The major sections of the Act do little to reverse the trend toward larger and larger multifunction bank conglomerates. The Act attempts to deal with the increased risks presented by such institutions, whether caused by moral hazard or simple management deficiencies, by creating a system for the dissolution of such institutions when they become insolvent. Indeed, the overarching theme of the Act is not so much to prevent crises as to preclude the possibility of using public funds in meeting losses or rescuing insolvent institutions. This is understandable considering the criticism of the use of the TARP program to sustain and recapitalize insolvent financial institutions while insolvent households were forced into foreclosure. Congress clearly wanted to wash its hands of any responsibility for the use of public funds in support of financial institutions.

The absence of a common legal framework for dealing with insolvent institutions was one of the main difficulties noted by regulators in responding to the recent crisis. For example, the Federal Reserve has argued that it had no mandate to act in the case of Lehman Brothers, while the Treasury had no

mandate to impose bankruptcy on AIG. In the absence of clear FDIC authority to resolve noninsured, nonbank financial institutions, direct government support appeared to be the sole alternative. Title II of the Dodd-Frank Act is meant to meet this difficulty through the creation of an “orderly liquidation authority” (OLA) that gives the FDIC power to seize control of such institutions on the determination by the Treasury secretary that they threaten the financial stability of the United States. It mandates the FDIC to liquidate such designated institutions so as to maximize the value received from the disposition of the company’s assets, minimize any loss, mitigate the potential for serious adverse effects to the financial system, ensure timely and adequate competition and fair and consistent treatment of bidders on assets and deposits, and prohibit discrimination.

According to the Act, implementing orderly liquidation requires that the FDIC determine that such action is necessary for purposes of the financial stability of the United States, and not for the purpose of preserving the covered financial company; ensure that the shareholders of a covered financial company do not receive payment until after all other claims and the Depositors Insurance Fund are fully paid; ensure that unsecured creditors bear losses in accordance with the priority of claims; ensure that the management and board of directors responsible for the failed condition of the covered financial company are removed (if still present at the time at which the FDIC is appointed receiver); and not take an equity interest in or become a shareholder of any covered financial company or any covered subsidiary.

Another reason for the use of direct government intervention in the recent crisis was the need for rapid action in order to prevent further deterioration of the financial condition of the institutions in difficulty and the risk of contagion. However, under OLA, the determination by the Treasury secretary has to be made on recommendation of certain designated federal regulatory authorities (such as the FSOC) and with an evaluation of why the institution should not be dealt with under the Bankruptcy Code, and after consultation with the president. The Act also requires that before the Treasury secretary can make the determination that the FDIC should be appointed receiver, he or she must first make a requisite series of specific underlying findings, including that the company is in default or is in danger of default; that should the company so default, the resolution of the company under the otherwise applicable federal or state law would have serious adverse consequences for the financial stability of the United States; that there are no private sector alternatives available that would avoid such adverse consequences; that there are no inappropriate potential effects on the claims or interests of creditors, counterparties, or shareholders that would result from such appointment; and that the seizure of such company under an OLA will prevent or otherwise limit damage to the financial stability of the United States (analysis must consider the effectiveness of such seizure in mitigating the potential adverse effects on the financial system, the cost of such resolution to the general fund of the Treasury, and the potential of such seizure and resolution for increasing excessive risk taking going forward).

In the view of Joshua Rosner (2011), there is a fundamental flaw in the OLA process caused by the fact that it creates two different regimes under which a large financial firm can be wound up: traditional bankruptcy and the OLA. He notes that the value of a firm in its “going concern” state is dependent on the resolution process employed when it fails. All nonfinancial firms and most financial institutions use the Bankruptcy Code; commercial banks use the Federal Deposit Insurance Act; broker-dealers use the

Securities Investor Protection Act. There may be different systems for different types of firms, but there are not, and there should not be, multiple processes for the same firm. In sum, the absolute worst thing that regulators can do is exactly what they're doing now: signaling to the public and the markets, ex ante, which firms will cause systemic instability and then providing a US Treasury-funded bailout scheme through the Orderly Liquidation Authority. Where investors have great certainty and clarity about the workings of the US bankruptcy process, the OLA's dangerous subjectivity, increased opacity, preference for short-term creditors, and ambiguity in how it will treat similarly situated creditors will only increase the uncertainty among creditors of a failing institution and cause necessary risk capital to pause at precisely the time this capital is most needed.

The OLA provision also mandates that the financial industry pay (after the fact) for the costs of any such dissolution activity undertaken by the FDIC. The powers granted to the FDIC as the liquidator are thus very similar to those currently in use for insured institutions, including, where necessary, the ability to continue the operations of a designated institution by means of an unencumbered bridge bank. The Act empowers the FDIC to establish such rules and regulations as it deems necessary or appropriate for implementing an OLA. This is one area in which its operations concerning insured and noninsured designated institutions will differ. In its resolution of normally insured depository institutions, the FDIC has considered the assets transferred by any institution to an arm's-length SPV via structured financing securitization as claimable by secured creditors. However, the agency has indicated that it does not intend to apply this procedure in implementing the new OLA, thus protecting assets transferred to a special entity from the liquidation.

One of the difficulties faced by the FDIC in dealing with the resolution of large banks is the limited size of the deposit insurance funds (much like the Federal Savings and Loan Insurance Corporation in the 1980s). While the ultimate source of funds is the federal government, and thus the Federal Reserve, the idea is that it should be self-financing, based on insurance premia charged to the insured institutions. Given the leitmotif of the Act to eliminate the use of public funds to rescue the financial system, Dodd-Frank mandates measures to increase the size of the insurance fund, as well as measures to adapt the premia to the risk that institutions introduce into the system.

The Act, in section 334, thus raises the minimum designated reserve ratio (DDR) of fund assets to insured deposits, which the FDIC must set each year, to 1.35 percent (from the former minimum of 1.15 percent), and removed the upper limit on the DRR (which was formerly capped at 1.5 percent) and therefore on the size of the fund; required that the fund reserve ratio reach 1.35 percent by September 30, 2020 (rather than 1.15 percent by the end of 2016, as formerly stipulated); required that, in setting assessments, the FDIC offset the effect of requiring that the reserve ratio reach 1.35 percent by September 30, 2020, rather than 1.15 percent by the end of 2016, on insured depository institutions with total consolidated assets of less than \$10 billion; eliminated the requirement that the FDIC provide dividends from the fund when the reserve ratio is between 1.35 percent and 1.5 percent; and maintained the FDIC's authority to declare dividends when the reserve ratio at the end of a calendar year is at least 1.5 percent, in addition to granting the FDIC sole discretion in determining whether to suspend or limit the declaration or payment of dividends. The FDIC has acted to exceed the requirements of the Act, raising the DRR to 2 percent in 2011.

The Act also requires that the FDIC amend its regulations to redefine the assessment base used for calculating deposit insurance assessments. Under Dodd-Frank, the assessment base must, with some possible exceptions, equal average consolidated total assets minus average tangible equity. The FDIC has proposed eliminating risk categories and the use of long-term debt issuer ratings for large institutions, using a scorecard method to calculate assessment rates for large and highly complex institutions, and retaining the ability to make a limited adjustment after considering information not included in the scorecard. The final rule will define a large institution as an insured depository institution that had assets of \$10 billion or more as of December 31, 2006 (unless, by reporting assets of less than \$10 billion for four consecutive quarters since then, it has become a small institution); or that had assets of less than \$10 billion as of December 31, 2006, but has since held \$10 billion or more in total assets for at least four consecutive quarters, whether or not the institution is new. In almost all cases, an insured depository institution that has held \$10 billion or more in total assets for four consecutive quarters will have a CAMELS rating; however, in the rare event that such an institution has not yet received a CAMELS rating, it will be given a weighted average CAMELS rating of 2 for assessment purposes until actual CAMELS ratings are assigned. An insured branch of a foreign bank is excluded from the definition of a large institution.⁵

On the insurance provided by the Depositors Insurance Fund, the Act calls in the FDIC to fully insure the net amount that any member or depositor at an insured credit union maintains in a noninterest-bearing transaction account. Such amount shall not be taken into account when computing the net amount due to such member or depositor. The normal insurance level remains at \$250,000 for each separate, normal interest-bearing account.

Many commentators have suggested that while the FDIC was unwilling to intervene to resolve “too big to fail” institutions, it was certainly able to do so. This position has been made very forcefully by Thomas Hoenig (2009), former president of the Federal Reserve District Bank of Kansas City, on the basis of his experience in dealing with the resolution of Continental Illinois Bank. To facilitate the ability of the FDIC to deal with these very large financial institutions (which, as already noted, Dodd-Frank considers a fact of life), the Act mandates the formulation of so-called “living wills” in the form of the preparation of resolution plans and credit exposure reports.

The Act calls upon the Board of Governors of the Federal Reserve to require nonbank financial companies and bank holding companies that it supervises to periodically report the plan of such company for rapid and orderly resolution in the event of material financial distress or failure, which shall include: information regarding the manner and extent to which any insured depository institution affiliated with the company is adequately protected from risks arising from the activities of any nonbank subsidiaries of the company; full descriptions of the ownership structure, assets, liabilities, and contractual obligations of the company; identification of the cross-guarantees tied to different

⁵ US regulators use a rating scale of 1 to 5 based on a series of indicators to assess the soundness of a bank. They include (C) capital adequacy, (A) asset quality, (M) management, (E) earnings, (L) liquidity, and (S) sensitivity to market risk.

securities; identification of major counterparties; and a process for determining to whom the collateral of the company is pledged.

In addition, the Act calls for credit exposure reports covering the nature and extent to which the company has credit exposure to other significant nonbank financial companies and significant bank holding companies, and the nature and extent to which other significant nonbank financial companies and significant bank holding companies have credit exposure to that company.

The Fed and the FDIC will review these reports, and if, based on their review, the resolution plan of a nonbank financial company supervised by the Board of Governors or a bank holding company is not credible or would not facilitate an orderly resolution of the company, shall notify the company of the deficiencies in the resolution plan; the company shall resubmit the resolution plan within a timeframe determined by the Fed and the FDIC with revisions demonstrating that the plan is credible and would result in an orderly resolution, including any proposed changes in business operations and corporate structure to facilitate implementation of the plan.

The “living will” is thus designed to show ex ante that some firms are too big to fail, and will clearly put the major burden on large multifunction banks with complex global operations, such as Citigroup, Bank of America, JPMorgan Chase, Goldman Sachs, and Morgan Stanley. Sheila C. Bair, the former head of the FDIC, has suggested that the inability of a big bank to provide a credible resolution plan would be a condition for requiring that it be broken up by the transformation of its foreign operations into foreign subsidiaries subject to foreign regulators, in order to realign its legal structure and, if necessary, make it easier for regulators to liquidate the bank: “If they can't show they can be resolved in a bankruptcy-like process . . . then they should be downsized now” (quoted in Clark 2011). The aim of orderly liquidation is to avoid a repeat of 2008, when the Bush administration bailed out AIG and other firms but not Lehman Brothers. Lehman's bankruptcy virtually froze capital markets.

Minsky promoted smaller banking institutions as a way to ensure that local management and local knowledge could be used in the assessment of creditworthiness. He favored the imposition of the originate-and-hold banking model, which would have incentive structures that promoted financial stability rather than risk taking. Finally, he believed that promotion of small-to-medium-size financial institutions would be more consistent with a general policy biased against concentration of economic power—in both the financial and nonfinancial sectors. He would thus have been less willing to emphasize an OLA and resolution plans and more in favor of breaking up the large financial holding companies. It is interesting that under Glass-Steagall, banks were given one year to divest themselves of their securities affiliates and other prohibited activities, and there were no difficulties in meeting this timetable.

Provision of liquidity

The main instrument of Federal Reserve support during the crisis was its authority to open the discount window in urgent and exigent circumstances, as stipulated in section 13(3) of the Federal Reserve Act, to virtually any financial or nonfinancial institution against virtually any type of collateral. As a result of the

express desire of Congress to ensure that no support be given to failing financial institutions, the Dodd-Frank Act seeks to ensure that the Fed's discretion to provide emergency support to insolvent institutions does not circumvent an OLA. The Act thus calls on the Board of Governors, "in consultation with the Secretary of the Treasury, to establish the policies and procedures to ensure that any emergency lending program or facility is for the purpose of providing liquidity to the financial system, and not to aid a failing financial company, and that the security for emergency loans is sufficient to protect taxpayers from losses and that any such program is terminated in a timely and orderly fashion. The policies and procedures established by the Board shall require that a Federal reserve bank assign, consistent with sound risk management practices and to ensure protection for the taxpayer, a lendable value to all collateral for a loan executed by a Federal reserve bank" (Sec. 1101[a]).

In addition, the Act requires the Fed to establish procedures to prohibit borrowing from programs and facilities by insolvent borrowers. Further, it limits the ability of the Board to establish any emergency facility without the prior approval of the Treasury secretary, and, if approval is obtained, to report within seven days to the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Financial Services, providing the justification for the assistance; the identity of the recipients; the date, amount, and form in which the assistance was provided; and complete particulars of the assistance. The particulars include duration; collateral pledged and the value thereof; all interest, fees, and other revenue or items of value to be received in exchange for the assistance; any requirements imposed on the recipient with respect to employee compensation, distribution of dividends, or any other corporate decision in exchange for the assistance; the expected costs to the taxpayers of such assistance; and similar information with respect to any outstanding loan or other financial assistance, to be reported every 30 days.

And if such reporting were not sufficient, the Act gives the comptroller general of the United States the power to conduct audits, including onsite examinations, of the Board of Governors, a Federal Reserve Bank, or a credit facility, if the comptroller determines that such audits are appropriate, solely for the purpose of assessing, with respect to a credit facility or a covered transaction, the operational integrity, accounting, financial reporting, and internal controls governing the credit facility or covered transaction; the effectiveness of the security and collateral policies established for the facility or covered transaction in mitigating risk to the relevant Federal Reserve Bank and taxpayers; whether the credit facility or the conduct of a covered transaction inappropriately favors one or more specific participants over other institutions eligible to utilize the facility; and the policies governing the use, selection, or payment of third-party contractors by or for any credit facility or to conduct any covered transaction.

From his very early work on the reform of the Fed discount window, Minsky argued that the emergency actions provided by section 13(3) should be made permanent and part of the ordinary operation of the discount window. For Minsky, the reason was quite obvious: there is only one financial institution that does not face a liquidity constraint, and that is the Federal Reserve. As Chairman Bernanke has reiterated, the Fed has the ability to provide liquidity at the push of a computer key. In a complex, layered financial system in which every institution's liabilities must have a higher liquidity premium than its assets, all institutions ultimately rely on the banking system for support in the case of a shortfall of cash inflows and the need to refinance their liabilities. And the banking system relies on the Fed. Thus,

limiting discount lending to the banks means allowing a liquidity crisis to morph into an insolvency crisis in the rest of the financial system before it reaches the banks and access to the discount window becomes an option. Better to lend directly to the institutions facing liquidity difficulties. Indeed, this is what the Fed did in the current crisis, and it is the source of the criticism that the agency was bailing out insolvent institutions. However, the problem was that the Fed extended the reach of the discount window only after a crisis broke out. It provided support only after Bear Stearns was in difficulty, but then extended support to all equivalent institutions. The same was true in the case of Lehman, which was allowed to fail—and *then* the window was opened to other broker-dealer institutions. For Minsky, it would have been much better to open the window to these institutions as a matter of course, which might have prevented their decline into insolvency. Use of the liquidity facilities early on also could have been made transparent, leaving the Fed less open to the criticism that it was picking winning and losers.

Opening the window would have provided the Fed with a “window” onto the operations of the institutions seeking support, which would have alerted it much more quickly to the condition of their balance sheets. Instead of continually arguing that the crisis was contained, the Fed, had it been the lender to all financial institutions, would have known much earlier how much the decline in house prices and the markets for securitized structure had impacted all financial institutions.

Full implementation of Dodd-Frank will require over 200 rule-making provisions by regulatory agencies, over 60 special reports and, and an additional 22 reports. It thus places not only major responsibility for success of the Act in those bodies responsible for writing the specific rules but also an even greater burden on the supervision of those rules. Thus, the final form will be largely determined by the interaction between the political incentive for reform and the ability of the various government agencies to fulfill the intentions of the legislation and the supervisory bodies to monitor compliance.

The most important failing is that it leaves in place the underlying business model for financial institutions and the contradictions inherent in the 1999 GLB legislation that were at the core of the crisis. Indeed, the underlying logic of the Fed and Treasury rescue operations has been to restore this system. Nevertheless, as the next chapter explains, the answer is not simply to attempt to rewind the regulatory process that led from Glass-Steagall to the Financial Services Modernization Act.

CHAPTER 5. Why We Can't Go Back to Glass-Steagall

Recently, a number of authoritative voices have called for a return to the New Deal Glass-Steagall legislation as the most appropriate response to the 1999 Financial Services Modernization Act's failure to provide stability of the financial system. However, a clear understanding of the 1933 Banking Act, along with subsequent regulatory interpretation and legislation, suggests that this would be difficult, if not impossible. A new Glass-Steagall Act would have to be substantially different from the original, and some of the internal structural contradictions that led to its demise remedied.

What was Glass-Steagall trying to do?

First, it is important to note that the legislation, produced in slightly less than three months, was considered a stopgap measure that was enacted following three years of crisis. It drew extensively on reform proposals that had been under discussion since the establishment of the National Monetary Commission in 1908 and the subsequent creation of the Federal Reserve System. Indeed, the main proposal—the separation of banking and finance—had been put forward by Louis D. Brandeis (1914) in his famous condemnation of the turn-of-the-century financial system.

The Senate Committee on Banking and Currency report on the Act emphasizes the intention to construct a bill to correct the “immediate abuses” rather than prepare a completely comprehensive measure for the reconstruction of the U.S. banking system. A good summary⁶ of these “immediate abuses” is contained in the decision of the District of Columbia Circuit Court of Appeals: *A.G. Becker, Inc. v. Board of Governors of the Federal Reserve System* (1982). The basic abuses were deposit-taking banks' underwriting of and investment in securities, lending to finance the acquisition of securities, and margin lending to retail clients for the purchase of securities. The integrity of the public's holding of deposits in banks was to be ensured by prohibiting deposit-taking banks from these activities, and by preventing any financial institution engaged in these prohibited activities from taking deposits from the public.

The comprehensive measures

While the Constitution forbids states the right to issue debt or currency, it does not prohibit them from chartering banks. The Civil War-era National Bank Act sought to reduce the role of state banks by limiting the issue of national bank notes to federally chartered banks. But state banks responded by offering clients checkable deposits, and by the turn of the 20th century, state banks were dominant. This was partly due to a 1902 ruling by the Comptroller of the Currency limiting investments by national banks to any single borrower and curtailing the right of the large New York national banks to deal in and underwrite securities. State banks were not subject to these restrictions, and national charter banks formed state-chartered affiliates to evade them. It was the activities of these security affiliates that

⁶ This source has been chosen not because it is considered correct but rather because it is representative of what the courts have considered to be the essence of the New Deal legislation and thus the basis for legal interpretation.

produced most of the fraud and malfeasance during the 1920s stock market boom and that many experts considered to be the cause of the Great Crash.

To remove this abuse, section 20 of the 1933 Act specifies that “no member bank shall be affiliated in any manner . . . with any corporation, association, business trust, or other similar organization engaged principally in the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation of stocks, bonds, debentures, notes, or other securities” (FRB 1933, 398). Thus, the more “comprehensive measures” referred to by the Senate committee involved the elimination of this dual system of regulation by state governments and the federal government. In particular, the prohibition applied by most states to branch banking, and the decision of federal regulators to respect this rule, produced a predominance of small “unit” banks in the United States. This was often thought to be a contributory factor in the instability of the US system as compared to the Canadian, which had a small number of large banks and emerged from the 1930s without major financial crisis. To remedy these more fundamental problems would require unifying regulation at the federal level, possibly along the lines of “a constitutional amendment or some equally far-reaching measure necessitating a long postponement of action” (*A.G. Becker 1982*).

Correcting the manifest abuses produces a financial structure

Although considered stopgap measures, the restrictions on the immediate abuses had very clear consequences for the structure of the financial system. One set of financial institutions would be responsible for taking deposits from the public and making short-term loans to commercial and industrial borrowers through the creation of credit in the form of new deposit accounts. A second set of institutions would be charged with the long-term financing of capital investment through the initial underwriting and secondary distribution and trading of securities: bonds and equity.

Section 21 of the 1933 Act simply formalizes this difference between the short-term and long-term forms of finance for the private sector. It provides member banks with a monopoly on deposit business, subject “to periodic examination by the Comptroller of the Currency or by the Federal reserve bank of the district” and to the requirement that each bank “make and publish periodic reports of its condition” (FRB 1933, 398).

Following Brandeis’s admonition, the intention was to shield public deposits from exposure to or use in any securities market activities, and, in particular, to prevent member banks from owning or dealing in equity or forming affiliates to do so. Thus, the operational difference between commercial and investment banks rests on the former’s ability to receive deposits and the limiting of their investments to short-term, self-liquidating business loans.

However, H. Parker Willis’s (1921) analysis of the activity of commercial banks notes that their most important function is not the simple receipt of public deposits but rather the creation of liquidity for its borrowers through the acceptance function; this allows the bank to earn income in the form of a net interest margin, less charge-offs for bad loans. Banks not only receive and preserve deposits but also

create liquidity through leverage, and they are recompensed for this by the premium on their deposits relative to their assets and by their ability to scrutinize the solvency of borrowers.

Thus, while the 1933 Act limits the “receipt of deposits” to member banks, it also limits banks’ ability to use and create deposits to create liquidity for their clients to particular types of investments—what are generally called commercial and industrial (C&I) loans.

However, commercial banks are not unique in the creation of liquidity. While a commercial bank creates liquidity by ensuring that its liabilities have a higher liquidity premium than its assets and thus can always be exchanged for currency, investment banks also provide liquidity by ensuring that the liabilities they underwrite have a higher liquidity premium than the capital assets they finance and thus can be bought or sold in organized markets without a great variation in price. They do this by ensuring an active and liquid secondary market for securities through their broker-dealer activities as market makers. The 1933 Act provided monopoly protection for a particular means of providing liquidity through deposit creation, but it did not give commercial banks a monopoly on the creation of liquidity.

The viability of the commercial-bank business model under the 1933 Banking Act

National banks suffered from competition from alternative forms of liquidity creation even before their operations were restricted to short-term commercial and industrial loans in the 1933 Act—and had already begun to expand their lending into longer-term maturities. The financial system also evolved beyond the simple structure envisaged by the Banking Act as a result of a process of innovation and competition between regulated and unregulated banks. In any event, both the protected deposit business and the creation of liquidity based on deposit creation were eroded by competition from nonmember investment banks that were not restricted to a particular business model. Indeed, it was not the receipt of customer currency deposits that had to be protected but rather liquidity creation, or the acceptance function, if the separation of commercial and investment banks was to be sustainable. Once investment banks could provide these liquidity-creating services more cheaply than regulated banks, the latter’s business model became untenable, and with it the logic of the Glass-Steagall separation of commercial and investment banking.

Glass-Steagall created a monopoly that was bound to fail

For supporters of free-market liberalism, the decline of member banks as the providers of liquidity through insured deposit creation was simply an expression of the inefficiencies of a de facto cartel on deposit taking. For example, Kenneth E. Scott (1981) noted that the 1933 Act undertook to create a buyers’ cartel among banks, restraining competition among them for demand deposits and for time and savings deposits. And, according to George G. Kaufman (1988), the Act was blatantly anticompetitive, and economists generally agreed that most of its restrictions were no longer necessary, at least for restricting risk.

However, the erosion of the protections afforded member banks’ deposit business was as much due to the conscious decisions of regulators and legislators to weaken and suspend the protections of the Act—thus providing explicit support for the competitive innovations of nonmember banks—as it was to the

triumph of market forces over monopoly. Indeed, Glass-Steagall gave unregulated investment banks a monopoly over securities market activities, some of which could be made functionally equivalent to the deposit business and liquidity creation of regulated banks with the introduction of financial innovation.

Challenges to monopoly protection: Thrifts and asset securitization

An initial challenge to member banks' monopoly on the receipt of deposits came from savings-and-loan banks. Savings banks were considered investment banks, so they were excluded from the 1933 Act and the Regulation Q limits on deposit interest rates for insured member banks. When interest rates started to climb along with inflation, thrifts were provided a means of competing with member banks for insured deposits—but with fewer constraints as a result of deregulation. The end result was the savings-and-loan crisis, which led to the collapse of the industry.

But the real challenge to member banks' monopoly on liquidity creation came from the extension of asset securitization to encompass loans to businesses at lower financing spreads through risk reduction and redistribution. First, corporate issue of commercial paper displaced borrowing from commercial bank loans, and the guaranteed one-dollar net asset value of liabilities of money market funds provided a substitute for member bank deposits. Legislators in 1933 could not have foreseen the rise of commercial paper as a substitute for commercial and industrial loans or MMMFs as a substitute for retail deposits, and member banks could not respond by entering those markets.

However, in 1984 the Supreme Court ruled that the Federal Reserve had the authority to allow regulated banks to acquire brokers as a subsidiary in a bank holding company (see *Securities Industry Association* 1984), and in 1985 the Fed ruled that bank holding companies could acquire as subsidiaries firms that offered both brokerage and investment advice to institutional customers. Subsequent interpretations further relaxed the Act's section 20 restrictions, and then expressly allowed regulated banks to engage in securitization via affiliation with companies underwriting commercial paper, municipal revenue bonds, and securities backed by mortgages and consumer debts—as long as the affiliate did not principally engage in those activities.

The basic concept used by MMMFs was generalized in asset-backed securitization.⁷ This concept was soon extended to the securitized financing of a wide range of corporate liabilities. The remuneration from this activity comes from identifying any market mispricing of risk (i.e., "riskless arbitrage"). Instead of a spread between borrowing and lending rates determined by the bank's ability to assess credit risk and thus ensure the liquidity of its liabilities, riskless arbitrage requires just the opposite process. Here, it is the pooling, diversification, and structuring of the special-purpose entity's assets that reduces risk, along with the distribution of the assets into a large and active market that increases liquidity and converts high-rate, risky assets into lower-rate, less risky assets. In addition to the income generated from the interest spread between long-term assets and shorter-term liabilities, fees and commissions result from the origination of the loan, the underwriting of the securities, and the servicing of the structure itself.

⁷ This is an issue that Minsky considered crucial but did not discuss in great length in his published work; see Minsky 2008.

The decision by the SEC to exempt securitization structures from reporting as stand-alone financial institutions opened an alternative pathway for member banks to organize and operate affiliates that were neither regulated nor consolidated for financial reporting purposes. Again, regulators could have halted the development of asset-backed securities, but instead chose to suspend regulations in order to allow member banks to participate in their origination and sale.

The response to challenges from nonmember banks

To remedy the competitive disadvantages, member banks were allowed extensive exemptions from the section 20 and 21 interdictions against dealing in securities and with security affiliates, eroding the strict segregation provided by the original 1933 legislation. The combined impact of money market funds, exemptions for securities affiliates, and structured securitization is to provide liabilities with a higher liquidity premium than assets. The impact of these structures was to allow noninsured institutions to challenge the monopoly given commercial banks to make their liabilities more liquid than their assets through the use of deposit insurance and balance sheet regulation. They also increased system liquidity without the same regulatory prudential measures imposed on banks to ensure the liquidity and price of deposit liabilities. Under the US regulatory system, money market deposit accounts and regulated bank deposits are considered equivalent, yet the former are regulated by the SEC and issued by investment banks, while the latter are regulated by the Fed and the Office of the Comptroller of the Currency (OCC) and issued by commercial banks.

The liberalizing power of “incidental powers”

Although competitive innovation played an important role in breaking down the segregation of deposit taking and securities activities, it was the legal and administrative interpretations of section 16 that ultimately eviscerated Glass-Steagall and the protections it provided to the business model envisaged for commercial banks. Section 16 accorded regulated banks “all such incidental powers . . . necessary to carry on the business of banking” (FRB 1933, 396). Most of the exceptions that enabled commercial banks to meet the competition from noninsured banks and caused the progressive erosion of Glass-Steagall came in later interpretations of the phrase “incidental powers,” especially by the OCC.⁸

The overall impact of these rulings laid the basis for the creation of proprietary trading by banks for their own account, as well as derivatives dealing and the provision of structured derivative lending—both of which led to the rapid growth of the OTC market in credit derivatives. Paradoxically, the justification was to provide regulated institutions, which were supposed to have a monopoly advantage, a level playing field with investment banks.

⁸ This language was originally introduced in section 8 of the National Bank Act of 1863 granting national associations “all such incidental powers as shall be necessary to carry on the business of banking,” but it made no reference at all to securities; see Krooss 1969, 2:1386. There has been extended debate concerning whether these powers are restricted to those expressly mentioned in the law or are subject to interpretation. In practice, the decision is left with the OCC, created in the same legislation. A 1995 Supreme Court decision (*NationsBank of North Carolina, N.A. v. Variable Annuity Life Insurance Co.*) affirmed the OCC’s full power to interpret section 8.

The regulatory dynamic of innovation and protection

The regulatory dynamic in the postwar period was one in which nonregulated investment banks devised innovations that were more competitive than those that could be offered by regulated commercial banks. In this environment, the monopoly protections placed on deposit business by the 1933 Act became a hindrance to the commercial banks' survival. Regulated institutions argued for the elimination of regulations until there was virtually no difference in the activities of FDIC-insured commercial banks and investment banks. As a result, the basic principles of the Act were eviscerated even before the Financial Services Modernization Act formally suspended Glass-Steagall's protections in 1999.

This de facto suspension of Glass-Steagall had another consequence for the stability of the financial system. Liquidity creation was increasingly transferred from deposit creation by commercial banks subject to prudential regulation, to securitized structures that were exempt from reporting and regulation because they were considered capital market activities and (usually) exempt from even SEC oversight—each one of these structures could be considered a ghost or “shadow” bank. Thus, the liquidity crises in 1998 and 2008 produced, not a run on banks, but a collapse of security values and insolvency in the securitized structures, and the withdrawal of short-term funding from the shadow banks. The safety net created to respond to a run on bank deposits was totally inadequate to respond to a capital market liquidity crisis.

The challenge that this new system of liquidity creation raises for those who would restore Glass-Steagall is twofold: how can commercial banks compete with investment banks in providing finance for business borrowers if they cannot deal and trade in securities, and how can regulations be written to prevent a repeat of the collapse of restrictions on securities trading? In particular, the question of “incidental powers,” the real Achilles heel of the 1933 Act, must be resolved. And even if these problems could be resolved, it would still leave open the fundamental reform that was bypassed by the original Act—the relation between state and national charters and regulations.

If there is no way back, is there a way forward?

A return to Glass-Steagall thus presents a conundrum. Since the activities that currently provide the least costly method of short-term business financing are fundamentally linked to securities market activities, they would be prohibited to regulated banks. In addition, it would appear impossible to legislate monopoly protections similar to those of 1933 for deposits without active monitoring and the prohibition of competitive innovations by nonregulated institutions. Similarly, a separation of short-term bank financing activity from long-term funding in securities markets would require prohibiting the structured financing and derivatives that have largely eliminated this distinction by converting long-term assets into liquid, short-term liabilities. Thus, an alternative source of revenue would have to be found for regulated banks, requiring regulators, legislators, and the judiciary to agree on the precise definition of permissible banking activities and the incidental powers required to carry them out.

Resolving this problem will not be easy. Neither a restoration of the current system, with better regulation, nor a return to 1933 will suffice. One approach would be to recognize the activity of deposit taking as a public service and to regulate it as a public utility, with a guaranteed return on regulated

costs. This approach would probably involve increased costs for transaction services or some form of government subsidy. Alternatively, a tax on nontransaction banks could provide this subsidy, rather than using it as a fund to bail out unregulated failed banks. Another possibility would be to define the business of banking as the creation of liquidity through the acceptance function of client liabilities. The expertise of banking would then be returned to minimizing charge-offs by improving the credit assessment of borrowers. All other forms of liquidity creation would fall within the realm of investment banking. Here, expertise would be in arbitraging market imperfections; that is, risk, interest rates, exchange rates, and so forth. Under such a division, MMMFs would be a permissible commercial bank activity.

A further approach would recognize that the Constitution reserves the provision of currency to the government, and there is no reason for the major part of this obligation to be outsourced to the private sector.⁹ The safekeeping of wealth and transaction services could thus be provided as a public service by a regulated utility—say, through a national giro payments system—eliminating the need for deposit insurance and the lender-of-last-resort function of the Federal Reserve. Both short- and long-term finance and funding could then be provided by private investment funds or trusts monitored by securities regulations, but without the need for a government guarantee. Private savings would then limit investment financing, and the benefits of the banks' acceptance function would be lost. The conundrum noted above remains unresolved.

⁹ Indeed, many economists have seen this as the major source of instability in the financial system. For example, Henry Calvert Simons (1948 [1934], 54–55) notes the “usurpation by private institutions (deposit banks) of the basic state function of providing the medium of circulation (and of private ‘cash’ reserves). It is no exaggeration to say that the major proximate factor in the present crisis is commercial banking. . . . Chaos arises from reliance by the state upon competitive controls in a field (currency) where they cannot possibly work.”

CHAPTER 6. Alternatives to the Dodd-Frank Reforms

The Outlook for Implementation of Dodd-Frank

Some two years after the adoption of the Dodd-Frank Act, its implementation is still far from complete. And despite the fact that one of the major objectives of the legislation was to remove the threat that banks that are “too big to fail” (TBTF) would require a taxpayer bailout, the financial system has become even more concentrated and the largest banks even larger. According to the president of the Federal Reserve Bank of Dallas, “Dodd-Frank . . . may actually perpetuate an already dangerous trend of increasing bank industry concentration” (Fisher 2012, 1). Indeed, the top five financial conglomerates now account for over 50 percent of total industry assets, and three of them are over or near the 10 percent limit on the share of national deposits set by the 1994 Riegle-Neal Act liberalizing branch banking (see the figures presented in Rosenblum 2012).

And as recovery from the deep recession caused by the 2008 financial crisis seems more visible, and most financial institutions have recovered sufficiently to repay the financial support that received under the Troubled Asset Relief Program, the specific rules that will be promulgated by government regulatory agencies and are required to make Dodd-Frank operational are facing increasing resistance from the financial services industry. Due to staff and funding shortages in regulatory agencies and the sheer number of regulations to be finalized, most will not be approved or implemented on the timetable required by the legislation.

Support for this resistance and additional delays have come from the judicial system. A ruling by the D.C. Circuit Court of Appeals (in *Business Roundtable v. Securities and Exchange Commission*, No. 10-1305¹⁰) has vacated a Securities and Exchange Commission (SEC) rule because its analysis of the costs of the regulation was not sufficiently extensive. A second suit has been brought against the Commodity Futures Trading Commission’s (CFTC) rule on derivatives position limits.¹¹ A recent report suggests that a large majority of the rule proposals currently under discussion do not meet the court’s requirements on impact assessment and could be successfully challenged (see CCMR 2012).

¹⁰ “On July 22, 2011, the U.S. Court of Appeals for the District of Columbia (the ‘D.C. Circuit’) found that the Securities and Exchange Commission (‘SEC’) acted arbitrarily and capriciously in adopting proxy voting rules, Rule 14a-11. Although the SEC’s adopting release devoted 60 pages to a cost-benefit analysis of this rule, the D.C. Circuit vacated Rule 14a-11 on the basis that the SEC ‘failed adequately to consider [Rule 14a-11’s] effect upon efficiency, competition, and capital formation.’ . . . In reaching this conclusion, the court sharply criticized the SEC’s efforts, at one point calling them ‘unutterably mindless’” (Kini and Proctor 2011, 1).

¹¹ On December 2, 2011, the International Swaps and Derivatives Association, Inc. and the Securities Industry and Financial Markets Association filed “a legal challenge to the Commodity Futures Trading Commission’s (CFTC) final rules that limit the positions that investors may own in certain commodities. . . . [T]he Associations contend that the CFTC’s decision-making process in enacting the Rule was procedurally flawed. Among other deficiencies, the CFTC adopted the Rule without making findings as to the necessity and appropriateness of the position limits, as required by statute. Furthermore, the CFTC failed to conduct any meaningful cost-benefit analysis and lacked a reasoned basis for its rule” (*Futures Magazine* 2011).

This goes beyond more specific industry complaints about particular regulations, such as the definition of a swaps trader or proprietary trading, and suggests that the Dodd-Frank legislation may be too extensive, too complicated, and too concerned about eliminating specific past abuses to ever be completed by regulators, implemented by supervisors, or respected by bank compliance executives. Indeed, it has been represented as a veritable paradise for regulatory arbitrage.

The result has been a call for a more fundamental review of the framework of financial system legislation. Some have even suggested a return to a regulatory framework closer to Glass-Steagall's separation of institutions by function. Last year's presentation to this conference (Levy Institute 2011) called specifically for a review of the 1999 "Act to enhance competition in the financial services industry by providing a prudential framework for the affiliation of banks, securities firms, insurance companies, and other financial service providers, and for other purposes," better known as the Gramm-Leach-Bliley (GLB) Act, which has been one of the main causes of the creation of financial conglomerates that are "too big to fail." Allowing the creation of financial holding companies to deal with the full range of financial services made them not only much larger, but also much more complex, and thus more difficult to regulate and supervise.

Chapter 2 reviewed Hyman Minsky's assessment of a 1991 Treasury proposal for modernization of the financial system. He returned to these considerations in his review of possible post-Glass-Steagall regulatory reform in a series of papers in 1995. In particular, he noted that one little-appreciated benefit of the 1933 Act was that "the scope of permissible activities by a depository institution was to be limited to what examiners and supervisors could readily understand. . . . it was not so much the differences and riskiness as it was the ease of understanding the operations that led to the separation of investment and commercial banking" (Minsky 1995a, 5). In other words, Glass-Steagall's limits on the size and activities of financial institutions would enable supervisors, examiners, and regulators to understand the institutions' operations. While Dodd-Frank seeks to limit government bailouts of large financial institutions, its "Orderly Liquidation Authority" gives preference to the use of Federal Deposit Insurance Corporation (FDIC) resolution procedures for merging failed institutions with larger ones on the presumption that larger institutions have a better ability to absorb new deposits and a lower likelihood of failure. But this is precisely what has led to the creation of a smaller number of larger and larger institutions, many of which surpass the Riegle-Neal limitations placed on the share of deposits of that an institution absorbing a resolved bank's depositors may hold.¹² And this will only make the resulting system more difficult to regulate and the job of the supervisors monitoring compliance that much more difficult.

The Federal Reserve Bank of Dallas (Rosenblum 2012) has proposed that the most effective way to simplify supervision of the financial system is to break up the large, complex financial institutions. But this proposal deals only with the size of financial institutions; it does not indicate what the structure of the smaller institutions should be. Creating a greater number of smaller, independent financial holding

¹² Indeed, a number of influential District Federal Reserve presidents have argued that existing FDIC authority would have been sufficient to deal with the resolution of the larger financial institutions during the crisis; see, for example, Hoenig (2009) and Fisher (2010). Well before the crisis, Feldman and Stern (2005) proposed that FDIC resolution could be used to prevent this process, but this provision was not included in Dodd-Frank.

companies would not necessarily simplify supervision if these companies were still dealing in multiple types of complex, interconnected financing activities involving structured lending instruments. Simply making institutions smaller need not make them safer and more stable if they are permitted the same range of activities involving the same types of financial instruments that produced the financial crisis. And in the absence of effective antitrust legislation,¹³ breaking up the larger institutions would in all likelihood simply engender another process of concentration by merger and acquisition similar to that seen after the suspension of branching restrictions.¹⁴ Simply breaking up the big TBTF banks into smaller banks is not sufficient to restore stability to the system.

As noted in chapter 2, Minsky was a firm believer in the “unit” “relationship” banking system that prevailed in the United States until the 1970s, and which was brought to a definitive end by the Volcker implementation of money supply management to fight inflation, creation of “regional” giant banks under the Riegle-Neal legislation facilitating branch banking, and then the GLB Act, which allowed large national conglomerate banks.

In his subsequent consideration of possible post-Glass-Steagall configurations of the financial system, Minsky accepted that the system would be a “universal bank” system or a “bank holding company” system. He favored the latter configuration and suggested that the simplicity and transparency inherent in Glass-Steagall could be preserved within a bank holding company structure by restricting the assets and liabilities of the separate subsidiaries. In a number of documents prepared for the mid-1990s discussions on reforming Glass-Steagall, Minsky proposed, “One or more subsidiaries of a post Glass-Steagall bank holding company will have monetary liabilities. These subsidiary institutions will enjoy protections from the central bank and treasury which guarantee that their monetary liabilities will not fall to a discount from their face value. . . . In exchange for this protection the assets they can own will be restricted. A representative post Glass Steagall bank holding company will have specialized financial subsidiaries which include not only a combination of commercial, investment and merchant banking subsidiaries but also a sampling of more specialized financial institutions such as credit card operations, payment operations, finance companies and the brokering and underwriting of insurance. Each subsidiary will have a dedicated equity, which protects the holders of the liabilities of the subsidiary” (Minsky 1995c, 3).

The implications of such a system are that, “once the distinction between the payments and financing operations of banks is recognized, it follows that post Glass Steagall banking firms will be structured as bank holding companies in which the payments subsidiary is clearly separated from the financing subsidiaries. In exchange for this protection the assets of the payments subsidiary will be limited to government debt and interest earning accounts at the Federal Reserve: the assets of the payments banks will not include business and household liabilities” (10–11). Thus, the “holding company structure

¹³ The existing antitrust legislation was written for a segmented system such as Glass-Steagall and has never been revised to deal with the problems of size and competitiveness created by GLB. See Kregel (2009b).

¹⁴ The history of deregulation in the United States has been to provide an initial period of increased entry and competition, only to be followed by increased bankruptcies and consolidation, restoring industry concentration to even higher levels. The airline industry is exemplary of this trend, which was also followed in telecommunications, energy, transport, etc.

of post Glass Steagall banking [would] quite naturally lead to 100% money” (12), as was proposed by Henry Simons (1934) and Irving Fisher (1935) in the 1930s and by James Tobin (1987) and Robert Litan (1987) in the 1980s.

In this approach, a single subsidiary would be dedicated to the provision of deposit-taking transactions services, while other subsidiaries would provide investment and merchant banking services. If all subsidiaries were sufficiently and separately capitalized, there could be no problem of “bailing out” the speculative activities to save the payments systems, there would be no possibility of using customer deposits for proprietary trading and speculation, and with appropriate balance sheet restrictions on the transactions subsidiary, the moral hazard created by deposit insurance could be even be eliminated.

The “vision” of the economic system

It is clear that Minsky meant for this proposal to be a means by which a possible post Glass-Steagall reform could best provide what he considered the basic objectives of the financial system—to support the capital development of the economy and to provide a safe and secure payment system—because in such a reformed system “the payments and the financing of the capital development of the economy functions will therefor[e] be separated in a post Glass Steagall banking structure” (Minsky 1995c, p. 8).

But such a proposal implied a method of providing for the system’s “capital development” that differed radically from that which had been the basis for the economic system up to that point. For Minsky, the capital development of the system meant more than just the gross accumulation of capital stock or the growth of national income, but rather a broader interpretation of the advancement of the economy, including maximizing the level of employment and an equitable distribution of income. Building on Joseph Schumpeter’s *Theory of Economic Development* (1934), Minsky proposed an explanation of more or less sustained capitalist expansion in the 19th and 20th centuries, interrupted by periodic crises in which the production interdependencies and financing arrangements and conventions would break down, leaving in their place conditions for renewed expansion. In such a system, equilibrium would be maintained, not by market-based price adjustment, but by a new configuration of productive and financial relations.

He also took from Schumpeter the idea that it was the logic of capitalist expansion that would produce these disruptions. While any economic or political system could suffer from random, external shocks or political upheaval, it would be impossible, by assumption of their nature, either to explain them or to provide a means of countering them unless they could be foreseen. In general, such shocks would only disturb existing relations that could be reestablished in a recovery. In Minsky’s view, however, the endogenous disruptions would change the underlying finance and growth dynamic of the system, with a transformed economy emerging to resume its expansionary path. This was not a theory of business cycles, but of Schumpeterian economic development; of continuous, evolutionary change driven by the generation of financial instability through the very mechanisms used by the financial system to support the capital development of the economy.

The importance of this innovative process¹⁵ led Minsky to the view that it “needs to be understood now that development financing involves taking risks. . . . The need is for a regulatory and supervising authority for the financial system that accepts that financing development opens the system to losses that have the potential for adversely affecting the safety and security of the economy’s payment facilities. To allow for this possibility the regulators need to try to insulate the payments system from the consequences of such losses. The problem therefore is to provide for protection of the payments system from the consequences of the losses which may ensue from development financing.” As a result, Minsky characterized the role of the financial system as servant to two mutually conflicted masters: “any capitalist banking and financing system” is “drawn between two masters” that it “needs to serve: one master requires assurance that the financing needed for the capital development of the economy will be forthcoming and the second master requires assurance that a safe and secure payments mechanism will be provided” (Minsky 1994, 10–11).

Minsky’s adaptation of the Simons/Fisher proposal may thus be seen as an attempt to ensure financial stability by separating financial institutions by function, or “master,” so that each would serve only one master. Banks that provide payment services can be made perfectly safe and secure by requiring 100 percent reserves in government currency and coin or other risk-free government liabilities.¹⁶ The financing of the capital development of the economy would then take place via retained earnings of corporations or by means of investors’ conscriptions committed to financing specific private business activities. Organized and supervised as an investment “trust,” such an institution would have a 100 percent ratio of capital to assets and thus should not be considered a threat to the financial stability of the economic system.

In such a perfectly separated, dual system there would be neither a deposit-credit multiplier, nor leverage, nor creation of liquidity. It would reflect the idea that the financial system should operate so as to create Friedrich Hayek’s idea of “neutral” money, in which all investment decisions are the consequence of the voluntary savings decisions of individuals. The Wicksellian alternative formulation of this condition is the equality of the nominal rate of interest and the “real” rate of return on investment. In this approach, there are no “monetary” disturbances to the equilibrium in the “real” economy, as savings determine loanable funds that limit investment. A financial system that was regulated via a 100 percent reserve requirement on deposits and a 100 percent ratio of capital to assets for investment trusts would then appear to resolve the conflicting objectives noted by Minsky. One institution would provide the safe and secure means of payment, while another would provide for the financing of the real capital development of the economy by intermediating and investing private savings.

But such a system could neither ensure the stability of the real economy nor assure stability of the capital financing institutions, since the real investments chosen could still fail to produce the anticipated

¹⁵ Minsky (1992b, note 11) stressed that his “emphasis upon the capital development of the economy as the prime problem that economic theory need address might best be called Schumpeterian.”

¹⁶ But such proposals are not new. The National Banking Act was based on government liabilities backing the issue of national banknotes. In any event, it did not provide the promised guarantee of stability, primarily because of the variability of the securities’ value. Minsky’s proposal would provide for a government guarantee to support the mark-to-market value of the assets; see Kregel 1996.

rate of return, and sectoral overinvestment and financial bubbles could still exist if there were herding behavior by the investment advisers of the trusts that produced procyclical financing behavior. There would always be a risk of investors calling on the government to save them from financial ruin.¹⁷

Narrow banking and a “monetary production economy”

For Minsky and Schumpeter, such a “narrow banking” system could not be considered a modern “capitalist” system; it would be akin to what John Maynard Keynes defined as a “real wage,” as opposed to a “monetary production,” economy.¹⁸ In a monetary economy, it is the role of the financial sector to ensure the financing of the acquisition and control of capital assets by increasing the liquidity of the liabilities of the business sector.

But more important, such a system would create a problem in a dimension other than what is now called “macroprudential” regulation. The liabilities of the financial system would be composed of household savings allocated to investment fund shares financing real investments, to the holding of deposits in the narrow banks backed by government debt or currency and coin, and to holding government-issued coin and currency. Business sector savings would be allocated to retained earnings financing, deposits in narrow banks, or government issues of currency and coin. This would mean that total private saving would exceed investment by the private sector’s holdings of narrow bank deposits and government currency, creating a tendency toward deflation or recession. Price and/or output stability would then require an exogenous addition to demand to offset this imbalance, such as might be provided by government expenditures financed by the issue of either currency or government bonds, if such issues were held as reserves for the narrow banks or the direct discounting of business sector liabilities. Alternatively, the central bank could engage in the direct financing of public or private sector investment expenditures. The “macroprudential” stability of the financial system would then require the application of what Abba Lerner (1943) called “functional finance.” The size of the deficit creating the additional government means of payment required for macroprudential stability would be determined by the private sector holdings of narrow bank deposits and currency, adjusted for the current account position.

Thus, what Minsky believed was the major factor stabilizing the postwar Glass-Steagall system—the existence of a “Big Government” deficit providing a floor under private sector incomes—would be even more important in a narrow banking system holding company structure than it was under Glass-Steagall. Indeed, Minsky’s use of the Keynes-Kalecki profits equation was meant to show that it is primarily the generation of corporate income that results from investment expenditures that allows current profits to cover the cash flows associated with the liabilities issued to finance investment. It is the level of business investment and government net expenditure that generate the cash flow that validates the corporate liabilities and produces the real source of financial stability in the system.

¹⁷ Aside from the theoretical difficulties in formulating the correspondence of real and money rates (see Myrdal 1939) or neutral money (see Sraffa’s [1932] criticism of Hayek’s neutral money proposals).

¹⁸ Indeed, as noted above (chapter 2), in his earlier writing (Minsky 1992a, 36–37) he dismissed “[n]arrow banks, 100 % money and other devices for losing sight of the main object: The capital development of the economy [and] the key role of banking [in] lending or better financing.”

In the absence of a large government sector to support incomes, debts could not be validated in a narrow bank holding company structure. But, even more important, it would be impossible in such a system for banks to act as the handmaidens to innovation and creative destruction by providing entrepreneurs the purchasing power necessary for them to appropriate the assets required for their innovative investments. In the absence of private sector “liquidity” creation, the central bank would have to provide financing for private sector investment trust liabilities, or a government development bank could finance innovation through the issue of debt monetized by the central bank. To meet the requirements of the “two masters,” such a system would have to combine Keynes’s idea of the “socialisation of investment” with the “socialisation” of the transactions and payments system. This suggests that in order to satisfy Minsky’s “two masters” the real problem that must be solved lies in the way that regulation governs the provision of liquidity in the financial system.

The “two masters” are Siamese twins

In the modern capitalist system that Minsky analyzed in his financial fragility hypothesis, two different types of financial institutions provide the liquidity required for the financing of Schumpeterian creative destruction. The control of real assets by productive enterprises can be financed through the issue by a financial institution of liabilities that can be used as a means of payment in lieu of the coin and currency issued by the government. This is what is commonly known as “deposit creation,” and it has traditionally been provided by what in the Glass-Steagall regulatory system were called “commercial” banks. Alternatively, productive enterprises can issue securities through the services of financial institutions that provide liquidity by acting as primary and secondary market-makers offering to buy and sell the securities at announced bid-ask spreads and in standard amounts. These have traditionally been known as “investment” or merchant banks.

Minsky considered deposit creation the basic activity of banks. He defined it as the “acceptance function”: “Banking is not money lending; to lend, a money lender must have money. The fundamental banking activity is accepting, that is, guaranteeing that some party is creditworthy. A bank, by accepting a debt instrument, agrees to make specified payments if the debtor will not or cannot. . . . A bank loan is equivalent to a bank’s buying a note that it has accepted” (Minsky 2008, p. 256). Thus, for Minsky the basic activity of a bank is not the safekeeping of depositors’ coin and currency, nor is it the investment of depositors’ funds because of an informational advantage. Rather, a bank’s basic activity is the creation of its own liabilities, which are used to acquire the liabilities of productive enterprises that it has “accepted”—that is, whose payment it has guaranteed. A narrow bank on this definition is not a bank, but simply a safe house or piggy bank for government issue of coin and currency.

Why banks are unique liquidity creators

Minsky noted that a bank’s liabilities have to be viewed as embodying more of Keynes’s liquidity premium than their assets (the liabilities that they accept and hold as assets in their loan books) if they are to earn income from a positive net interest spread, or “carry” (Ibid., 277). This “credit enhancement” function allows banks to increase the liquidity of the liabilities they accept and thus increase liquidity of

the whole system. Banks effectively turn the liabilities that stand behind fixed real capital assets into currency means of payment.

The successful operation of this basic function of banking thus depends crucially on the liquidity of bank liabilities, and this depends crucially on the assurance that bank liabilities can always be used as an equivalent means of payment that the borrower can use to acquire control over real goods, services, and capital assets. This means that bank liabilities have to be considered as a perfect substitute for government issued coin and currency.¹⁹

It is to ensure this substitutability that banks also issue their liabilities in exchange for government coin and currency of the public. That is, they offer a transaction or payments service to clients. These deposit liabilities are a simple borrowing operation that provides no credit enhancement or liquidity creation. Bank balance sheets thus contain two different, yet identical, promises to pay the holder currency and coin. One is backed by a liability, the promise of a productive business operation to pay; the other is (partially) backed by an asset, the customer's deposited coin and currency. The first function increases system liquidity because it increases the liquidity of the issuer of the liability; the second does not, since the depositor exchanges one type of means of payment for what is a guaranteed equivalent. These promises are treated as equivalent because they are both liabilities of the bank and carry the bank's pledge to exchange them on sight for coin or currency on an equal basis. Since both of these deposit liabilities are the basis of the payments system and serve as a store of existing value for individuals, the essential function of the financial system in creating the liquidity required for financing the capital development of the economy is inevitably joined with the provision of the means of payment. The "two masters" must of necessity cohabit in a single institution. The conflict between them cannot be solved through separation.

The second type of liquidity generation is the activity of financial institutions in providing for the primary distribution and secondary trading of the equity and fixed-income liabilities issued by firms to finance the capital development of the economy. It is this function that Keynes highlighted: "[T]he liquidity of investment markets often facilitates, though it sometimes impedes, the course of new investment. For the fact that each individual investor flatters himself that his commitment is 'liquid' (though this cannot be true for all investors collectively) calms his nerves and makes him much more willing to run a risk. If individual purchases of investments were rendered illiquid, this might seriously impede new investment. . . . So long as it is open to the individual to employ his wealth in hoarding or lending money, the alternative of purchasing actual capital assets cannot be rendered sufficiently attractive . . . except by organising markets wherein these assets can be easily realised for money" (Keynes 1936, 160–61).

In a primary distribution such as a "bought deal," the underwriting financial institution provides a guarantee of the price the issuer will receive for the liabilities and thus the amount of funds to be raised by the issue. The underwriter will buy for its own balance sheet any securities that cannot be sold to the public at the guaranteed price. The underwriter thereby guarantees that he will be able to exchange the issuer's liability for coin and currency or a deposit account held in a bank by the purchaser, or by

¹⁹ It is for this reason that banks are often characterized as "public-private" partnerships.

transferring a deposit of his own. Thus, if the issue is not fully sold, the underwriter will have to get a bank to either “accept” the unsold securities as collateral against the issue of a demand deposit that the underwriter transfers to the issuer or use its own deposits. In either case, the transaction requires the participation and transfer of bank liabilities and the potential access to bank liquidity to ensure the guarantee of liquidity. The “acceptance” function of the underwriter is thus directly dependent on being able to sell the securities to the public or to convince a bank to “accept” them in exchange for a transactions deposit.

The same thing is true for the operation of financial institutions in providing liquidity in the secondary securities markets. For example, the broker-dealers who operate in providing liquidity to the secondary markets as officially designated “specialists” or “dealers” quote bid-ask prices on stocks and hold inventories that fluctuate as they act as net buyer or seller in providing for an “orderly market.” These inventories of assets are financed via “call” loans, financed by banks’ “acceptance” of the specialist’s inventory as collateral. Thus, in general, the liquidity that is provided in the primary and secondary capital markets is directly or indirectly dependent on the liquidity generated by the “acceptance” function of deposit-issuing banks.

In engaging in this creation of liquidity for the capital development of the economy, the banks are always “short” government-issued coin and currency (in practice, central bank reserves). To cover this potential short position, Minsky noted that banks “make financing commitments because they can operate in financial markets to acquire funds as needed; to so operate they hold assets that are negotiable in markets and hold credit lines at other banks. The normal functioning of our enterprise system depends upon a large array of commitments to finance, which do not show up as actual funds lent or borrowed, and money markets that provide connections among financial institutions” (Minsky 2008 [1986], 256).

Since this market-support mechanism to acquire funds as needed is not fail-safe, central banks provide banks with access to reserves through the discount window, where the central bank “accepts” the assets held by the bank in exchange for government means of payment. This means that the ultimate source of liquidity in the system is the central bank “acceptance” function known as “lender of last resort.”

Along with the clear recognition of this function in the Banking Act of 1935, an additional mechanism was introduced to ensure the liquidity of bank liabilities: a federal deposit insurance guarantee financed via an assessment of the size of a bank’s deposit liabilities that creates a trust fund to be used to provide coin and currency to the depositors of a bank that fails to meet its commitments. It has usually been the case that the depositors of a failed bank have their insured credits transferred to a solvent bank that absorbs the failing bank, rather than being directly reimbursed by the insurance fund for the insured value of their deposits. But, as Minsky observed, it is neither the existence nor the size of the trust fund that provides the liquidity guarantee for the deposits. Ultimately, it is the willingness of the central bank to create reserves against this government agency guarantee. Thus, it is always the central bank in its role as lender of last resort that provides the ultimate source of liquidity for the banks that are regulated

and insured. And it is these banks that provide the ultimate liquidity to the rest of the financial system, which in normal times does not have access to the central bank.

Creators of “fictitious” liquidity: shadow “banks”

Minsky (2008 [1986]) noted that “[o]ur complex financial structure consists of a variety of institutions that lever on owners’ equity and normally make on the carry, that is, borrowing at a lower rate than their assets can earn” (277). Which is to say, there are institutions that engage in the same type of activity as banks but without the ability to borrow coin and currency from the general public, and thus without the ability to offer their own insured liabilities as a substitute means of payment. Since they cannot provide payments services, their fundamental activity is borrowing and lending to one another, thus increasing what Minsky called “financial layering”; that is, the issue of financial liabilities to acquire the liabilities of other financial institutions.

The liquidity of a liability issued by any nonbank financial institution will then be determined by its ability to finance it—that is, to borrow in order to hold the liability—and this will ultimately depend on access to the liquidity of a deposit-creating bank. In a consolidated view of the financial system, every liability in the nonbank financial system, as well as the short-term liabilities of the nonbank nonfinancial system, are all ultimately dependent on the liquidity created by the deposit-taking, insured banks. This means that a failure to meet a payment commitment by any institution in the financial system will have an impact on all the others in the system, and will ultimately depend on the liquidity provided by the banking system.

For Minsky, a condition of “financial distress” will occur when any individual financial institution “cannot meet its obligations on its balance sheet liabilities.” This may evolve into a “financial crisis” when “a very significant subset of the economy is in financial distress” and “‘a slight disturbance’ in money flows creates such widespread financial distress that financial crisis is threatened” and financial fragility is transformed into “financial instability.” At each stage in the evolution toward instability, financial intermediaries become more reliant on other financial institutions, and ultimately banks, to refinance their liabilities. As Minsky noted, “A key to the generation of financial crisis is whether the holders of marketable securities who have large scale debts outstanding can refinance or must liquidate their positions when they need cash” (Minsky 1964, 266). “The worst thing that could happen to the solvency of any financial institution is a forced sale of its assets in order to acquire cash. Imagine what would happen to asset values, if there were a need to liquidate government bond positions by the government bond dealers or if the sales finance companies were suddenly to try to sell their portfolios of consumer installment paper on some market. In order to prevent this type of forced liquidation of assets, the financial intermediaries protect themselves by having alternative financing sources, i.e., by having ‘de facto’ lenders of last resort. These de facto lenders of last resort ultimately must have access to the Federal Reserve System in times of potential crisis” (Minsky 1964, 376).

It is for this reason that Minsky proposed more active use of the discount window, and recommended that financial institutions always be “in the bank”—that is, borrowing from the window—because this provides direct information to the central bank about the assets the bank holds as its cushion of safety.

He also recommended that the window be open to all financial and nonfinancial institutions since their condition ultimately depends on the insured, regulated banks. It would thus be more efficient to provide the funding directly, rather than indirectly through the banks and the banks to their clients. Indeed, this is precisely what the Federal Reserve was forced to do in order to stem the collapse of liquidity in the recent crisis.

Regulators discover Minsky

The recent Bank for International Settlements Committee on the Global Financial System report on global liquidity (CGFS 2011) clearly reflects this view of liquidity in the financial system. It notes the basic difference between what it calls “official” liquidity, provided by the central bank, and private liquidity, provided by private financial institutions who “provide market liquidity to securities markets, for instance through market-making activity, or provide funding liquidity through, for example, interbank lending. The conditions under which these intermediaries can fund their balance sheets, in turn, depend on the willingness of other private sector participants to provide funding or market liquidity” (4). The report distinguishes between market liquidity, “the ability to trade an asset or financial instrument at short notice with little impact on its price,” and funding liquidity, “the ability to raise cash either via the sale of an asset (sometimes called balance sheet liquidity) or by borrowing.” “This interdependence underlines the endogenous character of private liquidity. At the macroeconomic level, private liquidity is thus closely related to monetary liquidity or funding conditions, as reflected in various monetary and credit aggregates or measures of the cost of funding. The creation and destruction of private liquidity is closely related to leveraging and deleveraging by private institutions. Depending on their ability or willingness to take risks and provide maturity or currency transformation services, financial institutions can both dampen or amplify monetary stimuli provided by central banks or provide stimuli of their own. . . . This gives rise to a pronounced state dependency of private global liquidity. In the extreme, general uncertainty about the viability of banks and other financial institutions can lead to a drying-up of private funding, and the private, endogenous component of global liquidity disappears altogether” (4–5).

The means of creation of “fictitious” liquidity

Minsky’s proposal for the “post Glass Steagall” holding company system not only eliminates the creation of liquidity from the transactions function of the system, but also does so for the subsidiaries financing the system’s capital development. But the post–Glass-Steagall system that emerged after the 1999 GLB Act evolved in a very different way. It not only preserved the creation of liquidity by the deposit-taking subsidiaries of the holding companies, but also validated a plethora of diverse structures that were introduced to provide additional liquidity into the system as a result of the competition between commercial and investment banks. Dodd-Frank is simply an additional step in the process described by Minsky in which a bailout of the financial institution validates the practices that originally created the difficulties.²⁰

²⁰ “Every time the Fed protects a financial instrument it legitimizes the use of this instrument to finance activity; it thus prepares the way for the next expansion of liquidity and the next financial crisis” (Minsky 2008 [1986], 106).

Indeed, the recent crisis can be described as the collapse of “fictitious” liquidity created by these structures, the failure of the banking sector to provide sufficient liquidity to prevent the onset of a “debt deflation” (what Minsky defined as the ultimate attempt to access liquidity by “selling position to make position”; that is, selling assets in order to redeem liabilities), and finally, the inability of the Federal Reserve to intervene sufficiently quickly to ensure the provision of liquidity for the non-bank financial institutions which could not find support from the insured banks.

There were three particular stages in the evolution of these nonbank liquidity-creating structures that are important for understanding the recent financial crisis. The first was the rapid expansion in the number and variety of institutions that “lever on owners’ equity” and their introduction of innovations that allowed them to earn more than the simple carry or net interest spread. The second was the rapid increase in the use of this liquidity to fund increased financial layering in the financial sector. The third was the increase in the use of liquidity to lend against positions whose return was determined by an expected change in prices (i.e., capital gains) rather than the production of income, but which had virtually no corresponding OTC or organized market to determine prices.

This tendency toward the increase in fictitious system liquidity emerged in the 1980s as noninsured, nonregulated financial institutions encroached on the protected deposit business of commercial banks and the commercial banks sought to protect their earnings by developing nonregulated sources of liquidity generation. The most emblematic of these alternative sources of liquidity is the money market mutual fund (MMMF), which issues shares with a fixed net present value of one dollar to finance the purchase of short-term commercial paper, thus providing the equivalent of a sight deposit in a regulated, insured commercial bank. It is a clone of a bank, and operates outside the regulatory regime governing banks. It provides the same transformation of illiquid business debt into a substitute for coin and currency, and can offer better returns and lower lending costs because of the lack of regulation. However, the liquidity so created is fictitious, since it depends on the ability of commercial firms to meet their payments on commercial paper, yet the fund shares are priced as if they were more liquid than insured bank deposits. The problem with the MMMF is that, in contrast to a commercial bank that can create deposits that are a substitute for coin and currency by granting a commercial loan, a mutual fund cannot automatically fund commercial paper by lending to the firm. It has to sell a mutual fund share to the general public in exchange for a sight deposit on an insured bank, or for coin and currency. It cannot engage in the acceptance function that Minsky considers the foundation of the system of financing capital development. A mutual fund share cannot buy a trip on the subway.

Largely in response to the introduction of capital requirements, in the late 1980s regulated, insured banks created “arm’s-length” structured investment vehicles (SIVs) to reduce the assets held on balance sheets and to increase their return on equity. An SIV purchases structured assets or mortgages from the originating banks and finances them through the issue of short-term asset-backed commercial paper and some medium-term equity notes. The SIV earns the interest spread between the short-term paper issued to fund the acquisition of the long-term structured assets, augmented by leverage created from overselling the commercial paper. Just as in the case of the MMMF, the SIV cannot create the funding of its assets; it must sell its paper to the public in exchange for a sight deposit or coin and currency. At their

peak, the asset-backed commercial paper issued by SIVs accounted for a third of the total asset-backed commercial paper market.

The shifting of assets from regulated, insured banks' balance sheets thus provided a benefit by reducing their capital requirements and increasing their fee incomes above the net interest margins. It also created an increase in fictitious system liquidity, since an SIV has no line of credit with the originating bank (as is the case with the issue of generic commercial paper) and no access to the central bank in the case of a runoff in its commercial paper as investors decline to roll over their investments (the equivalent of a deposit "drain" for a bank). In case of distress an SIV will be forced to sell its assets. The liquidity created by the SIVs was thus fictitious. After arguing that they were not formally committed to backing the commercial paper issued by the SIVs that they had created, managed, and administered, the banks eventually admitted a de facto responsibility and took the assets back onto their balance sheets, thus confirming Minsky's rule that liquidity in the system is always dependent on deposit banks. It is important to note that while the majority of assets in SIVs were collateralized mortgage assets, they were originally created to allow collateralization of the banks' credit card receivables, auto loans, student loans, and so forth, all of which were subject to the same increasing fragility as the mortgage-backed assets.

Another source of fictitious liquidity and a popular method of moving assets off balance sheets to increase income was asset securitization. This involves the creation of a formally independent special purpose entity—like an investment trust—that issues liabilities, usually fixed interest, whose proceeds are used to acquire fixed-income assets. The assets purchased from the originating bank are used as collateral for the liabilities issued to fund them. Various combinations of income from the assets can be structured to create different levels of risk associated with the different class, or "tranche," of liability. The aim is to create, through tranching, a structure in which the assets produce a higher return than paid on the liabilities. But, as Minsky observed, that should mean that the liabilities have a higher liquidity premium than the assets. Liquidity is thus created by ensuring that a large proportion of the liabilities has a higher credit rating than the assets that support them. This is achieved by "credit enhancement"; that is, by "overcollateralization" (the value of the assets is greater than the liabilities issued), by the purchase of credit default swap (CDS) protection, or by purchasing a guarantee from a monoline insurer that is sufficient to convince a nationally recognized statistical rating organization to provide the majority of the liabilities with an investment-grade rating, allowing pension funds, insurance companies, and trusts to purchase liabilities backed by assets that they would not be permitted to buy directly because their creditworthiness is too low. Here, the liquidity is provided by placing assets into a structure that transforms them into more liquid liabilities. Unlike the SIV, there is little maturity transformation in this process; rather, income is generated by transforming illiquid, higher-yielding assets into liquid, low-yielding assets. Again, this is fictitious liquidity, since it depends on the performance of the underlying assets or the conditions of the entities that provide the credit enhancement. Since both the issuers of CDSs and the monoline insurers provisioned against the risk

represented by the investment-grade rating of the liabilities rather than the much higher risk of the underlying assets, these guarantees were insufficient to ensure the liquidity of the liabilities.²¹

Derivatives, whether of the plain-vanilla variety or embodied in structured lending vehicles, also provide fictitious liquidity, since they provide the possibility of creating the equivalent of ownership exposure to an asset with only a minimum margin payment. Thus, instead of borrowing from a bank to invest in an asset, it is possible to take a long position by buying an OTC or exchange-traded derivative with only a small margin payment on top of the option premium. Regulated commercial banks were originally allowed to deal in derivatives on government securities since their intermediation was permitted by Glass-Steagall. But the Office of the Comptroller of the Currency, in a series of administrative rulings, eventually opened the way to dealings in derivatives on all types of assets, providing for the creation and dominance of insured banks in OTC derivatives dealing (see Kregel, 2010).

Another mechanism central to the recent crisis was the so-called “section 20” exemption that allowed banks to create “security affiliates” to deal in securities if income from these activities did not constitute their “principal” source of revenue (see Kregel 2010). Since banks were permitted to deal in government securities under Glass-Steagall, the principal source of income took the form of running a matched-book repurchase business that created little risk, and could be grossed up to produce any desired revenue to “cover” the income generated from securities trading. This allowed banks to engage in what would become proprietary trading, and, more important, created the “repo” market, in which an investor without capital could take a position in an asset that was funded by the use of the asset as collateral. The only financial commitment was to find the funds to cover the small or nonexistent “haircut” applied to the value of the asset in determining how much would be lent against it. Since such contracts were overnight or extremely short term, they again augmented the liquidity of long-term, less liquid assets. (It is worth noting that the repo market had been a persistent source of fraudulent activity and regulatory difficulty over many years prior to the recent crisis.²²)

All of these innovative structures greatly increased the ability of the system to create and finance the holding of, and speculation in, new types of exotic financial assets. For this reason, they are often described as constituting a “shadow” banking system, but they were not banks and they did not create “liquidity” in the same way as a regulated bank—that is, through the guarantee of provision of means of payment. This fictitious liquidity depended more on particular movements in the prices of the assets and the ability to sell them as required than on their ability to produce income. When these price anticipations were not realized, it was impossible to generate liquidity through the sale of underlying assets without creating declines in prices that produced loss and potential insolvency. Indeed, most of these assets were long term, with no formal or informal markets or market makers. Not only were there no markets in which to sell them, there were no market makers or prices to value the assets. Their very

²¹ It is telling that the SEC appears to have believed that the rating of securities by rating agencies provided an assessment of their “liquidity”: “securities that were rated investment grade by a credit rating agency of national repute, typically were more liquid and less volatile in price than securities that were not so highly rated” (Adelson 2007).

²² This list is not exhaustive. For example, rehypothecation of collateral and securities lending in prime brokerage accounts also augment system liquidity at no cost or at only a small haircut on value.

existence and value depended on fictitious liquidity, and when it disappeared, so did their value. Ultimately, the liquidity required to support these assets depended on their acceptance by insured banks. If banks were not willing to provide it, then it had to be provided by the central bank if an outright debt deflation was to be avoided.

In the recent crisis, the fact that many bank holding companies were also involved in the creation of this “shadow” liquidity severely limited the ability of their banking subsidiaries to provide liquidity support, since to do so would have required increasing borrowing from depositors rather than accepting the liabilities of another unit in the holding. A single institution cannot provide accommodation to itself, since it would just be transferring losses from one unit to another, jeopardizing its ability to attract customer “core” deposits.

Liquidity was not used to provide for the capital development of the economy

The basic difficulty caused by the recent explosion of fictitious liquidity is that it was used primarily to finance the acquisition of financial assets that did not represent real capital assets or the expected future income from real assets but rather an anticipated appreciation in the price of the assets—an appreciation that was driven by the increase in fictitious liquidity. The stability of these positions was again dependent on a particular pattern of price change. And many in the industry recognized these structures as implicit “Ponzi” schemes (see McCulley 2007). When these anticipated price movements were not realized, many of the structures in which margins were linked to the value of the position generated an increased demand for accommodation for a position whose value was declining. Thus, the demand for liquidity increased with a decline in the value of the position and the decline in the amount of fictitious liquidity it could provide. The fact that there were no markets to provide evaluations of the worth of the positions made it more difficult to assess risks, leading to an often inappropriate increase in haircuts and margin calls, and reducing liquidity at precisely the moment the structures required additional liquidity to remain viable.

In simple terms, the shadow system created liquidity to fund holdings of financial assets and to generate incomes from trading assets in order to exploit price differences, rather than to generate income and employment. As Minsky pointed out, a borrower’s balance sheet represents a flow dimension that is crucial to its stability: the balance between the financing costs of the liabilities relative to the income generated by the assets. For a business firm, this is business income from output, employment, and the sale of output. For a financial institution financing the firm, its income is derivative of the firm’s income. However, most of the lending in the recent crisis was lending by one financial institution to another in order to finance their holdings of financial assets and income generated by simple price volatility. This is “financial layering” within the system and represents the increased financial fragility that was generated by this creation of “fictitious” liquidity.

What is wrong with current regulatory proposals?

The basic error in the current regulatory approach embodied in Dodd-Frank is that it does very little to limit the creation of fictitious liquidity or to redirect the creation of that liquidity to the financing of the

capital development of the system.²³ Dodd-Frank seeks to limit the exposure of government to the consequences of another collapse of regulated, insured institutions, requiring the latter to hold higher levels of equity capital in order to meet the losses created by a debt deflation caused by a reversal in anticipated prices. But capital is meant to be a reserve to ensure solvency of the institutions, and the insolvencies that were avoided in the recent crisis were created by excessive liquidity creation. The ability to create liquidity depends on the financing institution engaging in the acceptance function. Only a regulated bank offering insured deposits can do this. Avoiding another crisis will thus depend on limiting the means of “fictitious” liquidity creation noted above.

As Minsky’s proposal above suggests, the way to make banks truly safe is for every subsidiary of the bank holding company to carry a 100 percent reserve ratio and a 100 percent capital ratio. But no amount of capital can substitute for the creation of the liquidity required for the capital development of the system. This is particularly true for nonbank investment trust structures that are implicitly 100 capitalized.

One way to do it would be to modify Minsky’s proposal by placing limitations not only on the assets and liabilities of the subsidiaries but also on the number and functions of the subsidiaries of a financial holding company. Holding companies providing transaction services, a store of value, or financing (for housing, consumers, or short-term business financing of commercial paper) would then be limited to activities closely related to liquidity creation. A separate group of holding companies, with the appropriate related sets of activities, would provide underwriting and capital market services for the financing of productive investment. The aim would be to limit each type of holding company to a range of activities that are sufficiently linked to their core function, and to ensure that each company were small enough to be effectively managed and supervised (see Kregel 2008).

As proposed in last year’s Levy Institute report (Levy Institute, 2011), some of the difficulties created by Dodd-Frank are due to the attempt to introduce Glass-Steagall-type provisions into the 1999 GLB Act without revisiting its main provisions relating to the revision of the 1956 Bank Holding Company Act. A realistic attempt to preclude “too big to fail” banks would seem to require revision of GLB.

But such a revision would be both time-consuming and difficult in the present political environment. A more expeditious method of reform that could replace Dodd-Frank would be to ask if there were any reason why the fictitious-liquidity structures that have grown up in the process of deregulation are necessary to the operation of the economy. Indeed, most of the liquidity-creating structures mentioned above were generated by the restrictions on activity caused by the segmentation of financial functions and competition between commercial and investment banks. Since the GLB Act eliminated any such distinction, the justification for most of these structures loses cogency.

²³ One of the greatest deficiencies in the new Bank for International Settlements regulations on liquidity is that they set liquidity requirements for financial institutions rather than limiting the financial institutions that create liquidity. The former are specious for as Keynes reminded, there is no such thing as system liquidity, while it is possible to restrict the operation of institutions that provide liquidity. It is also likely that they will distort the prices of the assets that satisfy this requirement as usually happens with any division between regulatory and nonregulatory assets.

For example, is there any reason why MMMFs should exist independent of banks? They could be eliminated by a simple ruling reversing the original court decision that commercial paper was a security and thus could not be operated by commercial banks under Glass-Steagall. Under GLB, there is no reason for them to exist, and they could be transformed into regulated, insured institutions by a simple decision of the Financial Stability Oversight Council.

There is also no reason why securitization should exist in its present form. Indeed, if these structures were regulated like other financial institutions and subject to transparency and reporting, they would in all probability not be viable (see Kregel 2010). As suggested by Lew Ranieri (1996), one of the innovators in securitization, there are some assets that should not and cannot be successfully securitized. Thus, the assets that are permitted in securitized structures should be subject to regulation. It is instructive that government-sponsored enterprises oversaw the securitization of “conforming” mortgage assets without difficulty as long as they met the strict conditions for inclusion. It thus follows that some securitized structures cannot be effectively risk rated, and credit ratings should not be permitted as an indication of their suitability for certain portfolios.

Repurchase agreements should be regulated so that they do not fund speculative financial institutions, such as proprietary trading desks or hedge funds. The supposed need for collateralized deposits of large size could be easily met by extending deposit insurance to all deposits. Repos have been the source of fraud and instability throughout their history, even when they were primarily restricted to risk-free government securities. They could simply be reclassified as loans and regulated as such.

Derivatives have become an integral part of the modern financial system, and hardly any position is undertaken or financing instrument created without the inclusion of a derivatives position. The problem is that while they disperse risk and provide hedging, they often hide the true risk to the purchaser. Trading on regulated exchanges will not change the lack of transparency concerning risk exposure. The problem could be reduced if derivatives positions were fully margined.

These measures would not guarantee system stability, as new mechanisms of fictitious liquidity would quickly be invented. But they could be easily introduced by simply reversing the regulatory and legal decisions that allowed them to come into existence, primarily in order to provide for a more level playing field between commercial and investment banks. The level playing field was secured by the GLB Act, which rendered these measures outdated and unnecessary. They should have been repealed when the act was approved or, better, by revision of the act itself. Either approach would provide a degree of regulatory control over fictitious liquidity creation and thus stem the reflexive impact of its collapse on asset prices. This would also require financial institutions to seek other forms of income; among them, lending to support the capital development of the economy.

All of these decisions are within the remit of existing regulatory agencies or the FSOC and could be implemented rapidly and without the delays surrounding the implementation of Dodd-Frank.

Addendum by way of conclusion: Serving two masters—the conundrum of regulation

Much of the innovation that has occurred in the Glass-Steagall system was part of an attempt by regulated banks to increase their return on equity. And much of the deregulation in the financial system was introduced in order to allow commercial banks to augment their income and compete with less regulated investment banks. Ironically, some foresaw this problem as leading to the disappearance of commercial banking (see Kregel 1997). Instead, it is the investment banks that have disappeared as a result of GLB.

For any financial institution, its return on equity is determined by the return on assets multiplied by the ratio of assets to bank equity, better known as leverage. The problem that commercial banks faced was the decline in the share of system assets that were being financed by bank liquidity, along with the decline in net margins on this business. Thus, deregulation provided a way to increase leverage, but the creation of bank holding companies that could use this increased leverage to improve system liquidity and thus inflate the amount of income produced led to greater financial fragility and eventual collapse. An increase in capital ratios does nothing to increase the returns to traditional liquidity creation by means of acceptance lending. Rather, it will simply lead to an increase in leverage or to greater consolidation, as banks seek to improve their bottom line by raising the price of services. An alternative, which Minsky suggested, is for banks to access the central bank directly for reserves to hedge their short cash positions resulting from deposit creation. This would preclude the need for offering retail deposits as the base mechanism for generating reserves.

The conundrum of regulation is to find a way to allow banks to concentrate on financing the capital development of the economy through liquidity creation while at the same time providing secure transactions services with the combination earning rates of return on capital that are competitive with other forms of capital investment. Increasing the amount of capital required and thus the income that must be earned would appear to be a sure incentive to innovate in the direction of higher leverage and fictitious liquidity, or to charge more for the provision of transactions services.

Finally, macroprudential regulation has to recognize the importance, first noted by Marriner Eccles, of the impact of the employment rate and the government budget on the level of liquidity and the solvency of financial institutions. As Minsky continually emphasized, the success of the Glass-Steagall system was due as much to the existence of Big Government as a complement to the lender-of-last-resort function of the central bank as it was to the restrictions placed on the assets that deposit-taking institutions could hold.

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