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Working Paper

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Working Paper, No. 612

Provided in Cooperation with:

Levy Economics Institute of Bard College

Suggested Citation: Wray, L. Randall (2010) : What do banks do? What should banks do?, Working Paper, No. 612, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

This Version is available at:

<https://hdl.handle.net/10419/56947>

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Working Paper No. 612

What Do Banks Do? What Should Banks Do?

by

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Levy Economics Institute of Bard College

August 2010

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ABSTRACT

Before we can reform the financial system, we need to understand what banks do; or, better, what banks *should* do. This paper will examine the later work of Hyman Minsky at the Levy Institute, on his project titled “Reconstituting the United States’ Financial Structure.” This led to a number of Levy working papers and also to a draft book manuscript that was left uncompleted at his death in 1996. In this paper I focus on Minsky’s papers and manuscripts from 1992 to 1996 and his last major contribution (his Veblen-Commons Award–winning paper).

Much of this work was devoted to his thoughts on the role that banks do and should play in the economy. To put it as succinctly as possible, Minsky always insisted that the proper role of the financial system was to promote the “capital development” of the economy. By this he did not simply mean that banks should finance investment in physical capital. Rather, he was concerned with creating a financial structure that would be conducive to economic development to improve living standards, broadly defined. Central to his argument is the understanding of banking that he developed over his career. Just as the financial system changed (and with it, the capitalist economy), Minsky’s views evolved. I will conclude with general recommendations for reform along Minskyan lines.

Keywords: Hyman Minsky; Banks and Shadow Banks; Money Manager Capitalism; Finance Capital; Financial Instability Hypothesis; Global Financial Crisis; Debt Deflation Theory

JEL Classifications: E12, E32, E58, G2, G18, G21

Before we can reform the financial system, we need to understand what banks do, or, better, what banks *should* do. This paper will examine the later work of Hyman Minsky at the Levy Institute on his project titled “Reconstituting the United States’ Financial Structure.” This led to a number of Levy working papers and also to a draft book manuscript that was left uncompleted. Much of this work was devoted to his thoughts on the role that banks do play and should play in the economy. To put it as simply as possible, Minsky always insisted that the proper role of the financial system was to promote the “capital development” of the economy. By this he did not simply mean that banks should finance investment in physical capital. Rather, he was concerned with creating a financial structure that would be conducive to economic development to improve living standards, broadly defined.

In many of his writings associated with this project Minsky emphasized six main points:

1. a capitalist economy is a financial system;
2. neoclassical economics is not useful because it denies that the financial system matters;
3. the financial structure has become much more fragile;
4. this fragility makes it likely that stagnation or even a deep depression is possible;
5. a stagnant capitalist economy will not promote capital development;
6. however, this can be avoided by apt reform of the financial structure in conjunction with apt use of fiscal powers of the government.

Central to his argument is the understanding of banking that he developed over his career. Just as the financial system changed (and with it, the capitalist economy changed), Minsky’s views evolved. I will focus on his papers and manuscripts from 1992 to his last major contribution in 1996 (Minsky [1996], his Veblen-Commons award paper). In this paper I will focus on Minsky’s general approach to financial institutions and policy; I will not provide specific recommendations for policy reform.

WHAT DO BANKS DO?

According to Minsky, “A capitalist economy can be described by a set of interrelated balance sheets and income statements” (Minsky 1992a: 12). The assets on a balance sheet are either financial or real, held to yield income or to be sold or pledged. The liabilities represent a prior commitment to make payments on demand, on a specified date, or when some contingency occurs. Assets and liabilities are denominated in the money of account, and the excess of the value of assets over the value of liabilities is counted as nominal net worth. All economic units—households, firms, financial institutions, governments—take positions in assets by issuing liabilities, with margins of safety maintained for protection. One margin of safety is the excess of income expected to be generated by ownership of assets over the payment commitments entailed in the liabilities. Another is net worth—for a given expected income stream, the greater the value of assets relative to liabilities, the greater the margin of safety. And still another is the liquidity of the position: if assets can be sold quickly or pledged as collateral in a loan, the margin of safety is bigger. Of course, in the aggregate all financial assets and liabilities net to zero, with only real assets representing aggregate net worth. These three types of margins of safety are individually important, and are complements not substitutes.

If the time duration of assets exceeds that of liabilities for any unit, then positions must be continually refinanced. This requires “the normal functioning of various markets, including dependable fall-back markets in case the usual refinancing channels break down or become ‘too’ expensive” (1992a: 14). If disruption occurs, economic units that require continual access to refinancing will try to “make position” by “selling out position”—selling assets to meet cash commitments. Since financial assets and liabilities net to zero, the dynamic of a generalized sell-off is to drive asset prices toward zero, what Irving Fisher called a debt deflation process. Specialist financial institutions can try to protect markets by standing ready to purchase or lend against assets, preventing prices from falling. However, they will be overwhelmed by a contagion, thus, will close up shop and refuse to provide finance. For this reason, central bank interventions are required to protect at least some financial institutions by temporarily providing finance through lender of last resort facilities. As the creator of the high powered money, only the

government—central bank plus treasury—can purchase or lend against assets without limit, providing an infinitely elastic supply of high powered money.

These are general statements applicable to all kinds of economic units. This is what Minsky meant when he said that any unit can be analyzed as if it were a “bank,” taking positions by issuing debt. Financial institutions are “special” in that they operate with very high leverage ratios: for every dollar of assets they might issue 95 cents of liabilities; their positions in assets really *are* “financed” positions. Further, some kinds of financial institutions specialize in taking positions in longer-term financial assets while issuing short-term liabilities—that is, they intentionally put themselves in the position of continually requiring refinancing. An extreme example would be an early 1980s-era thrift institution that holds 30-year fixed-rate mortgages while issuing demand deposits. Such an institution requires continuing access to refinancing on favorable terms because the interest rate it earns is fixed and because it cannot easily sell assets. This can be described as an illiquid position that requires access to a source of liquidity—Federal Home Loan Banks or the Fed.

Still other kinds of financial institutions specialize in arranging finance by placing equities or debt into portfolios using markets. They typically rely on fee income rather than interest. In normal circumstances they would not hold these assets directly, but if markets became disorderly they could get stuck with assets they cannot sell (at prices they have promised) and thus would need access to financing of their inventories of stocks and bonds. Some might hold and trade assets for their own account, earning income and capital gains, or might do so for clients.

Thus there are many kinds of financial institutions. Minsky distinguished among traditional commercial banking, investment banking, universal banking, and public holding company models. A traditional commercial bank makes only short-term loans that are collateralized by goods in production and distribution. The loans are made good as soon as the goods are sold—this is the model the Real Bills doctrine had in mind (1992c). The bank’s position is financed through the issue of short-term liabilities such as demand and savings deposits (or, in the 19th century, bank notes). The connections among the bank, the “money supply,” and real production is close—the sort of relation the quantity theory of money supposed. Essentially, the firm borrows to pay wages and

raw materials, with the bank advancing demand deposits received by workers and suppliers. When the finished goods are sold, firms are able to repay loans. Banks charge higher interest on loans than they pay on deposits—with the net interest margin providing bank profits. In the early postwar period it was common for banks to charge fees for managing deposits—this helped to pay for the payments system. However, innovation and competition with shadow banks forced banks to make interest payments on deposit accounts—reducing bank profits as banks not only had to pay interest on their liabilities but also had to operate a costly payments system. This helps to explain the high leverage ratio of banking: to keep the differential between loan and deposit rates low the bank needs a high asset-to-capital ratio in order to earn an acceptable profit rate on owner's equity. Alternatively, banks would need to make the payments system a profitable operation—charging fees for deposit accounts and payments. However, if there are viable alternatives—such as cash—there will be limits to a bank's ability to squeeze profits out of the payments system. High bank leverage is the trade-off for keeping interest rate differentials low.

If deposits are to maintain parity (with each other and with cash), losses on assets must be very small because the commercial bank's equity must absorb all asset value reductions. It is the duty of the commercial banker to be skeptical; as Minsky loved to say, a banker's cliché is "I've never seen a pro forma I didn't like"—borrowers always present a favorable view of their prospects. This is why careful underwriting is essential. While it is true that loans can be made against collateral (the goods in the process of production and distribution), a successful bank would almost never be forced to take the collateral. A bank should not operate like a pawn shop. As Martin Mayer (2010) says, banking has always been a business where profits come over time as borrowers pay principal and interest. He alludes to the morality of a loan officer, whose success depends on the success of the borrower. It goes without saying that betting on the failure of one's borrower is inimical to the duties of a commercial bank.

There is a very important but subtle point made by Minsky regarding the ability of the commercial bank to "force" a surplus from whence comes gross capital income (profits and interest). If we take the simplest economy, the commercial bank finances the total wage bill by extending loans and creating deposits. Only a portion of the wages will

be received by workers producing consumer goods—what we can call wage goods. The other portion of wages is paid to workers producing investment goods, yet these workers will spend their income on wage goods. Producers of the wage goods will thus receive gross profits equal to the wages paid in the investment goods sector. While it appears to any single firm that its profits are attributable to entrepreneurial finesse (good management and marketing, market power, productivity of its labor and capital, and so on), this can only determine the distribution of profits among firms. If there is no production of investment goods, then there will be no aggregate profits (if one firm makes profits this is identically equal to losses of other firms). In conditions of depressed expectations of future profitability, investment collapses and so does aggregate profit because workers in the investment sector will lose their jobs.

The banker holds the key—he is the “ephor of capitalism,” as Minsky’s original dissertation advisor, Schumpeter, put it—because not only do entrepreneurs have to be sufficiently optimistic to invest, they must also find a banker willing to advance the wage bill to produce investment output. Note that this ability to force a surplus (and to accumulate capital) is separate from the issue of financing ownership of capital goods. As mentioned above, the fundamental purpose of a financial system is to support the capital development of the economy. By financing the wage bill of workers in the investment goods sector, commercial banks are promoting the capital development of the economy even if they do not actually provide finance for position-taking in investment goods. Hence, we can separate the issue of producing capital goods from ownership of them. For Schumpeter, and for Minsky, the “ephor of capitalism” breaks the simple circuit of production and consumption of wage goods—in which banks simply finance production of consumer goods by workers whose consumption exactly exhausts the wage bill required to produce them. In other words, the ephor allows production of profits by financing spending by those not directly involved in producing consumption goods. These profits are “saved” in the form of accumulated capital goods.

In the pre-1870 period that Minsky called the “commercial capitalism stage,” investment goods were owned directly by individual entrepreneurs and purchased out of accumulated savings (from profits). In the next stage, “finance capitalism,” capital goods had become too expensive for individual ownership so that the corporate form emerged.

External finance in the form of shares and bonds financed the ownership of capital assets. This leads to the second type of bank, the investment bank. The function of an investment bank is to provide the external finance needed to put the produced capital goods into the hands of the entrepreneur. Using our simple model, the investment bank intermediates between recipients of the financial surplus created in production (by the spending of workers in the investment sector) and the entrepreneur who wishes to hold the produced capital goods. Note that while this is often framed as an intermediation between “savers and investors” this should not be interpreted as “saving finances investment”—the saving (out of profits) is actually created by the production of the investment goods and the subsequent consumption by workers from the investment sector. In other words, this is about financing ownership of the capital goods, not production of them. Of course, the production of investment goods will not normally occur unless it is fairly certain that they will be sold—capital goods are typically produced on order for an entrepreneur who has already obtained a commitment from an investment bank to provide finance once the goods are ready.

For illustrative purposes we can distinguish between two investment banking models. In the first, the investment bank holds the equities and bonds issued by the corporation that requires financing of its capital stock. The investment bank in turn finances its position by issuing debt and shares held by households. If the investment bank’s debt is shorter term than the assets it holds, it must be able to refinance its position as discussed above. Mayer’s aphorism still applies: the investment bank will be successful only to the extent that its corporate borrowers are successful. Alternatively the investment bank simply places debt and equities of corporations into the portfolios of households. This model of investment banking does not require borrower success; rather than asking whether the borrower will repay the loan, this investment banker only worries whether he can sell the stocks and bonds he needs to place. Underwriting is no longer an essential activity—indeed, careful underwriting can be ensured only if the households that purchase the debt and equity marketed by the investment bank have recourse. Of course, investment banks can combine both models—owning only the equities and bonds that households do not wish to hold. Today in the United States, households mostly hold the bonds and equities of firms only indirectly, through professionally managed funds:

Most households that own wealth own it in the form of interests in funds, mutual, pension, money market, trust, and insurance reserves and these funds are the major holder of the liabilities of the largest companies. As a result of the vast accumulations in these funds a new type of financial capitalism has emerged. The managers of such funds are mainly interested in what has been called total returns, which are short-term returns of dividends and the change in the values in the market of the securities. The various manias, from conglomeration to leveraged buy outs, that have swept capitalism in the past years have reflected the power of these funds. Let us call the 1990s version of the capital market/commercial bank financial structure money manager capitalism. (Minsky 1992c pp. 37–38)

We will return to these issues below when we examine Minsky's final stage of capitalism, the "money manager phase."

This second investment bank model is often referred to as a "markets" model as opposed to a "banks" model because it largely relies on investment banks selling corporate debt to households and fund managers. The development of the asset-backed securities markets is the best example, in which originating banks (of a wide variety) package loans (again, of a wide variety) to serve as the collateral behind marketed securities. Originally the idea was that originating banks would shift the risks off their balance sheets, but they ended up retaining interests in a lot of the securities—again a point we will return to.

Minsky analyzed two alternative arrangements to the commercial bank plus investment bank model (Minsky 1992c). The first is the universal bank model that was adopted in Germany and Japan; the second is the Public Holding Company (PHC) model. A universal bank model combines commercial banking and investment banking functions in a bank that provides both short-term lending and long-term funding of the operations of firms. It issues liabilities, including demand deposits, to households and buys the stocks and bonds of firms. A universal bank might also provide a variety of other financial services, including mortgage lending, retail brokering, and insurance. The final alternative is the PHC model in which the holding company owns various types of financial firms with some degree of separation provided by firewalls. The PHC holds stocks and bonds of firms and finances positions by borrowing from banks, the market, and the Treasury. Minsky argued that the development of money manager capitalism has

led to a convergence of these three models. This prescient recognition in 1992 helps to explain the current crisis, in which problems with mortgages first brought down investment banks and then the short-term lending market (such as commercial paper) that bank holding companies had relied upon for financing their positions in assets—including collateralized debt obligations held by “special purpose vehicle” subsidiaries.

Note how investment banking separates the proximate owners of the real capital assets (the corporation) from the ultimate owners (the investment bank in the first model, or the households in the second). In fact, things can quickly become very complicated, with a “complex combination of equity shares, bonds, mortgages, leases and bank loans” that “finance the control of the capital assets that are needed for production” (Minsky 1992c: 32). All of the liabilities of the corporation are assets of other economic units, entailing “dated, demand, or contingent claims to the cash flows that the operations of the unit, operations that depend upon the use of the physical assets, generate” (Minsky 1992c). Today’s production of investment goods creates the profits that validate yesterday’s decision to invest. Since today’s financing of ownership of positions in capital assets sets up a stream of commitments to pay over a series of tomorrows, if production of investment goods does not take place in those tomorrows, the positions taken today will not be validated. “This intertemporal nature of the financial relations of a capitalist economy is the essential reason why capitalist economies are likely not to behave in a nice equilibrium-seeking way and why markets need to be regulated and controlled” (Minsky 1992c).

The layering of financial commitments on top of real assets that generate income creates a new kind of capitalism, one in which ownership positions need to be continually validated. This is in sharp contrast to the commercial capitalism stage in which capital assets are owned outright so that an occasional failure to generate gross capital income does not threaten the entrepreneur’s existence. As we shall see, the finance capitalism stage is quite different because a shortfall of gross profits sets in motion behaviors that not only threaten the individual firm, but that can threaten the entire system with debt deflation dynamics.

According to Minsky, that phase of capitalism—what he called (after Hilferding) finance capitalism—collapsed in the Great Depression. Government was too small to

offset the collapse of gross capital income that followed the Great Crash of 1929. After WWII we emerged with a new stage of capitalism, managerial welfare-state capitalism, with a government so large that its deficit could expand sufficiently in a downturn to offset the swing of investment. This maintained the aggregate surplus, allowing debts to be serviced. In addition, we had an array of New Deal reforms that strengthened the financial system, separating investment banks from commercial banks, and putting in place government guarantees such as deposit insurance. But, as Minsky said, stability is destabilizing. The relatively high rate of economic growth, plus the relative stability of the financial system, over time encouraged innovations that subverted the New Deal constraints. In addition, the financial wealth (and private debt) grew on trend, producing huge sums of money under professional management. Minsky called this stage the “money manager phase” of capitalism. We will turn to banking in that stage next.

BANKING IN THE MONEY MANAGER PHASE OF CAPITALISM

In an important sense, money manager capitalism represents a return to the prewar finance capitalism stage. So let us first briefly look at the condition of the financial system in 1929, on the precipice of the Great Crash.

We have already examined the rise of external finance of a firm’s capital assets. As J.M. Keynes famously described in his *General Theory*, separation of nominal ownership (holders of shares) from management of enterprise meant that prices of equities would be influenced by “whirlwinds of optimism and pessimism.” Worse, as John Kenneth Galbraith (2009) makes clear, stocks could be manipulated by insiders—Wall Street’s financial institutions—through a variety of “pump and dump” schemes. Indeed, the 1929 crash resulted from excesses promoted by investment trust subsidiaries of Wall Street’s banks. Since the famous firms like Goldman Sachs were partnerships, they did not issue stock; hence they put together investment trusts that would purport to hold valuable equities in other firms (often in other affiliates, which sometimes held no stocks other than those in Wall Street trusts) and then sell shares in these trusts to a gullible public.

Effectively, trusts were an early form of mutual fund, with the “mother” investment house investing a small amount of capital in their offspring, highly leveraged using other people’s money. Goldman and others would then whip up a speculative fever in shares, reaping capital gains. However, trust investments amounted to little more than pyramid schemes (the worst kind of what Minsky called Ponzi finance)—there was very little in the way of real production or income associated with all this trading in paper. Indeed, as Galbraith showed, the “real” economy was long past its peak—there were no “fundamentals” to drive the Wall Street boom. Inevitably, it collapsed and a “debt deflation” began as everyone tried to sell out of their positions in stocks—causing prices to collapse. Spending on the “real economy” suffered and we were off to the Great Depression.

Again, as described above, this second type of investment bank (which intermediates shares between the issuing corporation and the household owners) opens up the possibility that underwriting will not be well done. All of this will sound familiar to anyone who has studied the dot-com, commodities, and real estate bubbles of the past decade (See Wray [2008a and 2008b]). While many point to the demise of Glass Steagall separation of banking by function, the problem really was the demise of underwriting. Below we will visit Minsky’s views on Glass Steagall. The New Deal’s reaction to the Great Crash was to prohibit commercial banks from handling equities—a reasonable response to the excesses of the 1929 boom. The banking crisis had been made very much worse because banks were caught holding stocks with little or no value, many of them issued by these investment trusts. Ironically, even the investment banks that had created the trusts got burned because they also held the worthless stocks. In some cases, this was because they got caught holding stocks they were trying to sell when the market crashed. However, many had invested in the pyramid schemes they created—following the greater fool theory that they would recognize the peak and sell out before the crash. Again, that will sound familiar to anyone who has studied the 2007 crisis—the banks that originated the toxic waste for sale to customers got caught holding it for precisely the same reasons.

In other words, the problem and solution is not really related to functional separation, but rather to the erosion of underwriting standards that is inevitable over a run of good times when a trader mentality triumphs. If a bank believes it can offload

questionable assets before values are questioned, its incentive to do proper underwriting is reduced. And if asset prices are generally rising on trend, the bank will try to share in the gains by taking positions in the assets. This is why the current calls by some for a return to Glass Steagall separation or to force banks to “put skin in the game” by holding some fraction of the toxic waste they produce are both wrong-headed. In the final section we will discuss some policies that could instead discipline underwriting standards.

Minsky argued that the convergence of the various types of banks within the umbrella bank holding company, and within shadow banks, was fueled by growth of money manager capitalism. It was also encouraged by the expansion of the government safety net, as Minsky (1992c: 39) remarked: “This convergence is also reflected in the United States by a proliferation of government endorsements of private obligations.” Indeed, it is impossible to tell the story of the current crisis without reference to the implicit guarantee given by the Treasury to the mortgage market through its GSEs (Fannie and Freddie), through the student loan market (Sallie), and even through the “Greenspan Put” and the Bernanke “Great Moderation”—that gave the impression to markets that the government would never let markets fail. In the aftermath of the crisis, the government’s guarantee of liabilities went far beyond FDIC-insured deposits 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 really was a foregone conclusion once Glass Steagall was gutted and investment banking, commercial banking, and all manner of financial services were consolidated in a single financial “big box” superstore with explicit government guarantees over a portion of the liabilities. Financial institution indebtedness grew to some 120% of GDP—the leveraging and layering of national income that Minsky addressed—with complex and unknowable linkages among chartered banks and mostly unregulated institutions. It was always clear that if problems developed somewhere in a highly integrated system, the Treasury and Fed would be on the hook to rescue the shadow banks, too.

By the 1990s the big investment banks were still partnerships so they found it impossible to directly benefit from a run-up of the stock market, similar to the situation in 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. This offered the opportunity to exploit inside information, to manipulate the timing of trades, or to push the dogs onto clients. But in the euphoric irrational exuberance of the late 1990s that looked like chump change. How could an investment bank's management get a bigger share of the action?

In 1999 the largest partnerships went public to enjoy the advantages of stock issue in a boom. Top management was rewarded with stocks—leading to the same pump-and-dump incentives that drove the 1929 boom. To be sure, traders like Robert Rubin (who would become Treasury secretary) had already come to dominate firms like Goldman. Traders necessarily take a short view—you are only as good as your last trade. More importantly, traders take a zero-sum view of deals: there will be a winner and a loser, with the investment bank pocketing fees for bringing the two sides together. Better yet, the investment bank would take one of the two sides—the winning side, of course—and pocket the fees and collect the winnings. Why would anyone voluntarily become the client, knowing that the deal was ultimately zero-sum and that the investment bank would have the winning hand? No doubt there were some clients with an outsized view of their own competence or luck, but most customers were wrongly swayed by investment bank's good reputation. From the perspective of hired management, the purpose of a good reputation is to exploit it—what William Black (2005) calls “control fraud.”

Before this transformation, trading profits were a small part of investment bank revenues—for example, before it went public, only 28% of Goldman's revenues came from trading and investing activities. That is now about 80% of revenue. While many think of Goldman and JP Morgan (the remaining investment banks since the demise of Lehman, Bear, and Merrill, which all folded or were absorbed) 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 a little over \$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. However, after the SEC began to investigate some of Goldman’s practices, that belief was thrown into doubt, causing share prices to plummet (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. It was thus not a simple matter of having Goldman or Citibank 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 funds and other invested funds. This finally became clear to the authorities after the problems with Bear and Lehman. The layering and linkages among firms—made opaque by over-the-counter derivatives such as credit default swaps—made it impossible to let them fail one-by-one, as failure of one would bring down the whole house of cards. The problem we now face is that total financial liabilities in the United States amount to about five times GDP (versus 300% in 1929)—so that every dollar of income must service five dollars of debt. That is an average leverage ratio of five-times income. That is one (scary) way to measure leverage, for as Minsky and Mayer argue, this 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 finance for 100% 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 because it relies on either sale of the asset or refinancing. While a traditional banker might feel safe with a capital leverage ratio of 12 or 20—with careful underwriting to ensure that the borrower would be able to make payments—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 and credit default swap “insurance,” and “overcollateralization” (markets for the lower tranches of securities). We need not go deeply into the details of these complex instruments. What is important is that income flows take a back seat in such

arrangements, and acceptable capital leverage ratios are much higher. For money managers, capital leverage ratios are 30 and reach up to several hundred. But even these large numbers hide the reality that risk exposures can be very much higher because many commitments are not reported on balance sheets. There are unknown and essentially unquantifiable risks entailed in counterparties—for example, in supposedly hedged credit default swaps in which one sells “insurance” on suspected toxic waste and then offsets risks by buying “insurance” that is only as good as the counterparty. Because balance sheets are linked in highly complex and uncertain ways, failure of one counterparty can spread failures throughout the system. All of these financial instruments ultimately rest on the shoulders of some homeowner trying to service her mortgage out of income flows—on average with \$5 of debts and only \$1 of income to service them. As Minsky argued, “National income and its distribution is the ‘rock’ upon which the capitalist financial structure rests” (Minsky 1992d: part III, p. 2). Unfortunately, that rock is holding up a huge financial structure and the trend toward concentration of income and wealth at the top makes it ever more difficult to support the weight of the debt.

In an ideal world, a lot of the debts will cancel, the homeowner will not lose her job, and the FIRE sector can continue to force 40% of all corporate profits in its direction. But that is not the world in which we live. In our little slice of the blue planet, the homeowner missed some payments, the MBSs issued against her mortgage got downgraded, the monoline insurers went bust, the credit default swaps went bad when AIG failed, the economy slowed, and the homeowner lost her job and then her house, real estate prices collapsed, and in spite of its best efforts to save money manager capitalism, the federal government has not yet found a way out of the morass.

BANKING ON CRISIS? THE RISE OF CASINO CAPITALISM

Minsky’s writings in the early 1992 were remarkably prescient; while he was addressing the banking crisis at that time (which followed the 1980s S&L crisis), most of his points could be made about the continuing evolution of the financial structure, which finally collapsed in 2007. He warned that the early postwar financial conservatism had given way to money manager capitalism that “ushered in a new era of pervasive casino

capitalism,” with the leveraged buy-outs of the late 1980s serving as a good example of the excesses. 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 over indebtedness may well be a legacy of pension funds in the United States” (Minsky 1992d: part II, p. 9). He argued that the decrease in the power of banks and the concomitant rise of the power of managed money “has little to do with the movement to deregulate banks and other financial institutions” (Minsky 1992d: part II, p. 9). Instead he blamed the 1979–82 Volcker experiment in monetarism that wiped out bank and thrift equity, payments systems 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: part II, p. 12). Thus, Minsky attributed the transformation of the financial sector away from banking and toward managed money that 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 an important role, Minsky insisted that this was of secondary importance.

On the eve of the 2007 crash, we no longer had any sharp distinction between investment banking and commercial banking—and repeal of the Glass Steagall Act in 1999 eliminated any remaining barriers. Banking was largely organized into holding companies with subsidiaries that could engage across the spectrum of financial activities. Some activities were farmed-out to independent or quasi-independent specialists (independent mortgage brokers, special purpose vehicles). Many financial services were supposedly taken out of financial institutions to be performed by “markets.” However, this was more apparent than real because the dominant financial institutions controlled those markets and set prices of financial assets (often using complex and proprietary models). This is probably what Minsky meant when he said that money manager capitalism had integrated the various models of banks. For our purposes, there was a handful of behemoth financial institutions that provided the four main financial services: commercial banking (short-term finance for business and government), payments services (for households, firms, and government), investment banking (long-term finance for firms and government), and mortgages (residential and commercial real estate). A lot

of the debts were securitized and ultimately held in pension, university endowment, and sovereign wealth funds. Note that if anything, the largest institutions have consolidated their power as a result of the crisis, largely through government help.

The originate to distribute model virtually eliminated underwriting, to be 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. As Jan Kregel (2008) has argued, the mortgages were Ponzi from the very beginning—they required rising real estate prices as well as continual access to refinancing because borrowers did not have the capacity to service the loans. Much of the activity was actually off the balance sheets of banks and thrifts, with mortgage brokers arranging for finance, with investment banks packaging the securities, and with the “shadow banks” or “managed money” holding the securities. 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 the toxic securities because that was all that markets were selling. Still, when delinquencies and defaults on mortgages rose, problems immediately came back to the banks through several avenues: they were stuck with securities they were trying to sell, they had sold credit default “insurance” or had provided “buy-back” guarantees on securities they had sold, they had special purpose vehicles with loads of bad assets, and they could not refinance positions in assets because the market for short-term debt had practically disappeared. But that was only the beginning of problems for the financial sector.

Above we mentioned that the investment banks in the late 1920s stock market boom had used “pump and dump” schemes to push overpriced stocks in their own subsidiaries into portfolios of clients; in many cases, the investment banks themselves got caught up in the whirlwinds of speculative fever, taking positions in what they knew to be pyramid schemes. Similar shenanigans took place over the past decade as traders adopted the “greater fool” theory: sure the whole thing would inevitably collapse, but each trader thought he could sell out position at the peak, shunting toxic assets off to the greater fools. Just as in 1929, traders found that selling into a collapsing market meant losses, and falling asset prices meant collateral calls with no access to finance.

In the modern era, it is not enough to put together Ponzi pyramid schemes or to sell trash to gullible customers. While investment banking today is often compared to a casino, that is not really fair. A casino is heavily regulated and while probabilities favor the house, gamblers can win 48% of the time. When a firm approaches an investment bank to arrange for finance, the modern investment bank immediately puts together two teams. The first team arranges finance on the most favorable terms for their bank that they can manage to push onto their client. The second team puts together bets that the client will not be able to service its debt. Even brokers do not currently have a fiduciary responsibility to take their client's best interests into account when selling them assets. Magnetar, a hedge fund, actually sought the very worst tranches of mortgage-backed securities, almost single-handedly propping up the market for toxic waste that it could put into CDOs sold on to "investors" (I use that term loosely because these were suckers to the "nth" degree; see Wray [2010] for details and references). It then bought credit default insurance (from, of course, AIG) to bet on failure. By 2008, 96% of the CDO deals arranged by Magnetar were in default—as close to a sure bet as financial markets will ever find. In other words, the financial institution often bets against households, firms, and governments—and loads the dice against them—with the bank winning when its customers fail. We are very far, indeed, from Martin Mayer's vision of banking, or Hyman Minsky's banks that finance the capital development of the economy.

In a case recently prosecuted by the SEC, Goldman created synthetic CDOs that placed bets on toxic waste MBSs. (Goldman agreed to pay a fine of \$550 million, without admitting guilt, although it did admit to a "mistake." Again, see Wray [2010] for details.) A synthetic CDO does not actually hold any mortgage securities—it is simply a pure bet on a bunch of MBSs. The purchaser is betting that those MBSs will not go bad, but there is an embedded CDS that allows the other side to bet that the MBSs will fall in value, in which case the CDS "insurance" pays off. Note that the underlying mortgages do not need to go into default or even fall into delinquency. To make sure that those who "short" the CDO (those holding the CDS) get paid sooner rather than later, all that is required is a downgrade by credit rating agencies. The trick, then, is to find a bunch of MBSs that appear to be overrated and place a bet they will be downgraded. The propensity of credit raters to give high ratings to junk assets is well-known, indeed assured by paying them to

do so. Since the underlying junk is actually, well, junk, downgrades are also assured. Betting against the worst junk you can find is a good deal—if you can find a buyer to take the bet.

The theory behind shorting is that it lets you hedge risky assets in your portfolio, and it aids in price discovery. The first requires that you've actually got the asset you are shorting, the second relies on the belief in the efficacy of markets. In truth, these markets are highly manipulated by insiders, subject to speculative fever, and mostly over-the-counter. That means that initial prices are set by sellers. Even in the case of MBSs—that actually have mortgages as collateral—buyers usually do not have access to essential data on the loans that will provide income flows. Once we get to tranches of MBSs, to CDOs (squared and cubed), and on to synthetic CDOs, we have leveraged and layered those underlying mortgages to a degree that it is pure fantasy to believe that markets can efficiently price them. Indeed, that was the reason for credit ratings, monoline insurance, and credit default swaps (CDS). CDSs that allow bets on synthetics that are themselves bets on MBSs held by others serve no social purpose—they are neither hedges nor price discovery mechanisms.

The most famous shorter of MBSs is John Paulson, who approached Goldman to see if the firm could create some toxic synthetic CDOs that he could bet against. Of course, that would require that Goldman could find clients willing to buy junk CDOs. According to the SEC, Goldman let Paulson increase the probability of success by allowing him to suggest particularly risky securities to include in the CDOs. Goldman arranged 25 such deals, named Abacus, totaling about \$11 billion. Out of 500 CDOs analyzed by UBS, only two did worse than Goldman's Abacus. Just how toxic were these CDOs? Only five months after creating one of these Abacus CDOs, the ratings of 84% of the underlying mortgages had been downgraded. By betting against them, Goldman and Paulson won—Paulson pocketed \$1 billion on the Abacus deals; he made a total of \$5.7 billion shorting mortgage-based instruments in a span of two years. This is not genius work—an extraordinarily high percent of CDOs that are designed to fail will fail.

Paulson has not been accused of fraud—while he is accused of helping to select the toxic waste, he has not been accused of misleading investors in the CDOs he bet against. Goldman, on the other hand, never told investors that the firm was creating these

CDOs specifically to meet the demands of Paulson for an instrument to allow him to bet against them. The truly surprising thing is that Goldman's customers actually met with Paulson as the deals were assembled—but Goldman never informed them that Paulson was the shorter of the CDOs they were buying! While Goldman admitted it should have provided more information to buyers, its defense was that: a) these clients were big boys; and b) Goldman also lost money on the deals because it held a lot of the Abacus CDOs. In other words, Goldman not only withheld crucial information, but it is also sufficiently incompetent to buy CDOs that it let Paulson put together with the explicit purpose of betting on failure. If that is not exploitation of reputation by Goldman's management, I do not know what would qualify.

By the way, in the AIG bail-out by the government, \$12.9 billion was passed-through to Goldman because AIG provided the CDSs that allowed Goldman and Paulson to short Abacus CDOs. So AIG was also duped, as was Uncle Sam. I have argued (Wray 2010) that we should not take Goldman's claim that it lost money on these deals too seriously. It must be remembered that when Hank Paulson ran Goldman, it was bullish on real estate; through 2006 it was accumulating MBSs and CDOs—including early Abacus CDOs. It then slowly dawned on Goldman that it was horribly exposed to what was turning out to be toxic waste. At that point it started shorting the market, including the Abacus CDOs it held and was still creating. Thus, while it might be true that Goldman could not completely hedge its positions so that it got caught holding junk, that was not for lack of trying to push risks onto its clients. The market crashed before Goldman found a sufficient supply of buyers to allow it to short everything it held.

Previously, Goldman helped Greece to hide its government debt, then bet against the debt—another fairly certain bet since debt ratings would likely fall if the hidden debt was discovered. Goldman took on U.S. states as clients (including California, New Jersey, and nine other states), earning fees for placing their debts, and then encouraged other clients to bet against state debt—using its knowledge of the precariousness of state finances to market the instruments that facilitated the shorts. To be fair, Goldman is not alone—all of this appears to be common business procedure. In early spring 2010, a court-appointed investigator issued his report on the failure of Lehman. Lehman engaged in a variety of “actionable” practices (potentially prosecutable as crimes). Interestingly, it

hid debt using practices similar to those employed by Goldman to hide Greek debt. The investigator also showed how the prices by Lehman on its assets were set—and subject to rather arbitrary procedures that could result in widely varying values. But most importantly, the top management, as well as Lehman’s accounting firm (Ernst&Young), signed off on what the investigator said was “materially misleading” accounting. That is a go-to-jail crime if proven. The question is why would a top accounting firm, as well as Lehman’s CEO, Richard Fuld, risk prison in the post-Enron era (similar accounting fraud brought down Enron’s accounting firm, and resulted in Sarbanes-Oxley legislation that requires a company’s CEO to sign off on company accounts)? There are two answers. First, it is possible that such behavior is so wide-spread that no accounting firm could retain top clients without agreeing to overlook it. Second, these practices may be so pervasive and enforcement and prosecution thought to be so lax that CEOs and accounting firms have no fear. I have argued that both answers are correct (Wray 2010).

The purpose of this discussion is not to single out any particular firm, nor is it to argue that such behavior is the *only* thing that investment banks do. Indeed, as a number of “kiss and tell” accounts (such as those by Das 2006 and Bookstaber 2007) show, questionable treatment of clients by investment banks has a long history. The only thing that appears to be relatively new is the dominance of traders and trading at these firms, as well as the zero-sum and short-termism mentality that creates a particularly unhealthy relationship between investment banks and their customers.

In the following section we return to Minsky’s insights on banking, trying to identify what banks should be doing in our new millennium. The previous discussion should make it pretty clear that banking as practiced in the first decade of the new millennium has gone seriously astray.

WHAT *SHOULD* BANKS DO?

Let us first enumerate the essential functions to be provided by the financial system.

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

Obviously there is no reason why any single institution should provide all of these services, although as discussed above the long-run trend has been to consolidate a wide range of services within the affiliates of a bank holding company. The New Deal reforms had separated institutions by function (and state laws against branching provided geographic constraints). Minsky recognized that Glass Steagall had already become anachronistic by the early 1990s. He insisted that any reforms must take account of the accelerated innovations in both financial intermediation and the payments mechanism. As discussed above, he believed these changes were largely market-driven and not due to deregulation. The demise of commercial banking and the rise of shadow banking was mostly a consequence of the transition to money manager capitalism.

In his draft book manuscript he dealt in detail with a Treasury proposal for “modernizing” the financial system. Briefly, this proposal made recommendations for “safer, more competitive banks,” by “strengthening” deposit insurance, weakening Glass Steagall, weakening state limits on branching, allowing corporations to own banks, and consolidating regulatory and supervisory functions in the Treasury at the expense of reduction of the role of the Fed. Minsky argued that the proposal was at best superficial because it ignored shadow banks. While he quibbled with the approach taken to rescue FDIC (recall that many thrifts had failed and even the largest banks were in trouble in the early 1990s), he agreed that deposit insurance had to be strengthened. He argued that

weakening Glass Steagall and state limits on branching were trying to “fix something that is not broke.” He argued that small- to medium-sized banks are more profitable and relation-oriented. In other words, there was no reason to allow or promote the rise of hegemonic financial institutions with national markets and broad scope. 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, relation-oriented banks. However he did recognize 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 are not interested in relation-oriented banking. Rather, Minsky would allow greater scope to the activities of the small community banks. We might call this “intensifying” banking—allowing each small institution to provide a greater range of services—as opposed to promoting branching and concentration of power in the hands of a few large bank holding companies with a variety of subsidiaries.

In his proposal for development of the newly independent eastern European nations, he argued that the critical problem was to “create a monetary and financial system which will facilitate economic development, the emergence of democracy and the integration with the capitalist world” (Minsky 1992c: 28). Except for the latter goal, this statement applies equally well to promotion of the capital development of the Western nations.

Minsky argued that there are two main ways in which the capital development of the economy can be “ill done”: the “Smithian” and the “Keynesian.” The first refers to what might be called “misallocation”: the wrong investments are financed. 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 most importantly from inappropriate investment—especially in commercial real estate investment. We could say that the 2000s again suffered from “Smithian” ill-done capital development because far too much finance flowed into the residential real estate sector. In both cases, Minsky would point his finger to securitization. In the 1980s because the

thrifts were not holding mortgages, they had funding capacity that flowed into commercial real estate; in the 2000s, the mania for risky (high return) asset-backed securities fueled subprime lending. In a prescient analysis, Minsky argued that

[b]ecause of the way the mortgages were packaged it was possible to sell off a package of mortgages at a premium so that the originator and the investment banking firms walked 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 when the fortunes of the originators are at hazard over the longer term. (Minsky 1992b: 22–23)

The implication is rather obvious: good underwriting is promoted when the underwriter is exposed to the longer-term risks.

This brings us back to Minsky’s skeptical banker:

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. As a result the capital development was not done well. Decentralization of finance may well be the way to reintroduce the necessary skepticism. (Minsky 1992a: 37)

Decentralization plus maintaining exposure to risk could reorient institutions back toward relationship banking. Unfortunately most trends in recent years have favored concentration. The “too big to fail” doctrine that dates back to the problems of Continental Illinois gives an obvious advantage to the biggest banks. These are able to finance positions at the lowest cost because the government stands behind them. The small local banks face higher costs as they try to attract local deposits by opening more offices than necessary, and because it costs them more to attract “wholesale” deposits in national markets. Even in the case of FDIC-insured deposits (which have no default risk), smaller banks pay more simply because of the market perception that they are riskier

because the government does not backstop them. As discussed, investment banks are now allowed to operate like a hedge fund, but can obtain FDIC-insured deposits and can rely on Fed and Treasury protection should risky trades go bad. It is very hard for a small bank to compete.

How can the system be reformed to favor relationship banking that seems to be more conducive to promoting the capital development of the economy? First it would be useful to reduce government protection for less desirable banking activities. There are two important kinds of protection the government currently provides: liquidity and solvency. Liquidity is mostly provided by the Fed, which lends reserves at the discount window and buys assets (in the past, government debt, but in recent years the Fed has bought private debt). Minsky always advocated extension of the 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, it is probable that the liquidity crisis could have been resolved more quickly. Hence, this kind of government protection should not be restrained.

It is the second kind, protection against default, that is more problematic. Deposit insurance guarantees there is no default risk on certain classes of deposits—now up to \$250,000. This is essential for clearing at par and for maintaining a safe and secure payments system. There is no good reason to limit the insurance to \$250,000, so the cap should be lifted. The question is about which types of institutions should be allowed to offer such deposits, or, 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 it resolves a failing institution it will receive only cents on the dollar of assets. In his discussion of the Treasury’s proposal for rescuing the FDIC, Minsky made it clear that “cost to the Treasury” should not be a major concern (another reason for removing the cap—it is not important to limit Treasury’s losses to the first \$250,000 of a deposit). We can probably also conclude for the same reason that riskiness of assets financed through issuing insured deposits should not be the major concern. Maturity of the 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, so it would not need to sell longer-term assets. Hence, the major argument for limiting a financial institution's ability to finance positions in assets by issuing insured deposits is that the government has a legitimate interest in promoting the public purpose. Banks should be prevented from using 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 government can do. One of these is underwriting—assessing credit-worthiness and building relations with borrowers that enhance their willingness to repay. Over the past decade a belief that underwriting is unnecessary flowered and then exploded. Financial institutions discovered that credit-rating scores cannot substitute for 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 (as credit raters have discovered). If banks are not doing underwriting, it is difficult to see why government needs them as partners: it would be much simpler to have government directly finance activities 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). Indeed, there has been a movement in that direction, with government taking back control over student loans. When government guarantees both the deposits as well as the loans (for example mortgages and student loans) it is difficult to see any role to be played by banks except underwriting.

The problem banks have faced over the past three or four decades is the “cream skimming” of their business by shadow banks (or, as Minsky called it, managed money). Uninsured checkable deposits in managed funds (such as money market mutual funds) offer a higher-earning, but relatively convenient, alternative to insured deposits, allowing much of the payments system to bypass banks. As Minsky argued, credit cards have also diverted the payments system out of banking (although the larger banks capture a lot of 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 that allows firms to borrow short term at interest rates below those on bank loans (sometimes, firms could even borrow more cheaply than banks could). Again banks recaptured some of that business by earning fees for guaranteeing commercial paper. But these competitive pressures caused banks to jettison expensive underwriting and relationship banking, replaced by the originate-to-distribute model.

There is no simple solution to these competitive pressures, although Minsky offered some ideas. In several publications Minsky argued that policy should move to make the payments system 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% 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 is not desirable to try to return to the early postwar period in which banks and thrifts monopolized the payment system. However, in the 1800s, the federal government eliminated private bank notes by placing a tax on them. In a similar manner, preferential treatment of payments made through banks could restore a competitive edge. Transactions taxes could be placed on payments made through managed funds. In addition, banks could be offered lower, subsidized fees for use of the Fed's clearing system. Minsky also held out some hope that by substituting debit cards for checks, banks could substantially lower their costs of operating the payments system—something that does seem to be happening (Minsky 1992d).

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 argued this causes local banks to open more offices than necessary to compete for retail deposits. Recall that part of the reason for the New Deal's Regulation Q was precisely to eliminate competition for such deposits, on the belief that competition raised costs of such funds and induced banks to purchase riskier assets to cover those costs. The biggest "brand name" banks more easily attract retail deposits, and they also have the advantage that they are believed to be

safer. For this reason, Warren Mosler has called for elimination of any requirement that banks maintain any specified proportion of their funding in the form of retail deposits. Combined with Minsky's argument that banks should be able to borrow reserves on demand at the Fed, this means bank costs of funds would be the Fed's overnight interest rate—plus any “frown costs.”

Some, including Minsky's Levy colleague Ronnie Phillips, have called for a return to the 100% money proposal of Irving Fisher and Milton Friedman. Deposit-issuing banks would be allowed to hold only Fed reserves and Treasury debt as assets. Minsky argued that this loses

sight of the main object: the capital development of the economy. The key role of banking is lending or, better, financing. The questions to be asked of any financial system are what do the assets of banks and other financial institutions represent, is the capital development of the economy better served if the proximate financiers are decentralized local institutions, and should the stricture lean towards compartmentalized or broad jurisdiction institutions? (Minsky 1992a: 36–37)

To be sure, Minsky did not categorically reject the narrow bank proposal (indeed, he wrote a supportive note for the book by Phillips)—he simply believed it addresses only a peripheral problem, safety and soundness of the payments and savings systems. It does not address promotion of the capital development of the economy.

Recall from above that there is the “Smithian” problem and the “Keynesian” problem: banks might finance the wrong projects and 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 would remove any requirement that banks finance a portion of their positions in assets using retail deposits). This does not ensure that we have solved the Keynesian problem, because banks might finance too much or too little activity to achieve full employment. Offering unlimited funding to them deals only with the liability side of banking, but leaves the asset side open. It is somewhat easier to resolve the “too much” part of the Keynesian problem because the Fed or other bank regulators can impose constraints on bank purchases of

assets when it becomes apparent that they are financing too much activity. For example, in the past real estate boom it was obvious (except, apparently, to mainstream economists and too many at the Fed) that lending should be curtailed.

The problem is that the orthodox response to too much lending is to raise the Fed's 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 because—as the Volcker experiment showed—interest rate hikes that are sufficiently large to kill a boom also are large enough to cause severe financial disruption (something like three-quarters of all thrifts were driven to insolvency). In fact, Minsky argued that the early 1990s banking crisis was in part due to the aftermath of the Volcker experiment of a decade earlier. Indeed, this recognition is part of the reason that the Greenspan/Bernanke Fed turned to “gradualism”—a series of very small rate hikes that are well-telegraphed. Unfortunately, this means that markets have plenty of time to prepare and to compensate for rate hikes, which means they have less impact. For these reasons, rate hikes are not an appropriate means of controlling bank lending. Instead the controls ought to be direct: raising downpayments and collateral requirements, and even issuing cease and desist orders to prevent further financing of some activities.

For a while it was believed that capital requirements are a proper way to regulate bank lending: higher capital requirements not only make banks safer, but they also constrain bank lending unless the banks can raise capital. Unfortunately, neither claim was correct. Higher capital requirements were imposed in the aftermath of the S&L fiasco, and codified in the Basel agreements. Rather than constraining bank purchases of assets, banks simply moved assets and liabilities off their balance sheets—putting them into special purpose vehicles, for example. Basel also used risk-adjusted weightings for capital requirements, to encourage banks to hold less risky assets for which they were rewarded with lower capital requirements. Unfortunately, banks gamed the system in two ways: a) since risk weightings were by class, banks would take the riskiest positions in each class; and b) banks worked with credit-ratings agencies to structure assets such as MBSs to achieve the risk weighting desired. For example, it was relatively easy to get triple-A-rated tranches (as safe as sovereign government debt) out of packages of

subprime and “liar loan” Alt-A mortgages—with 85–90% of the risky mortgages underlying investment-grade tranches. Finally, Minsky (1986) argued that all else equal, high capital ratios necessarily reduce return on equity (and, hence growth of net worth), so it is not necessarily true that higher capital ratios increase safety of banks because it means they are less profitable. Indeed, with higher capital ratios they need to choose a higher risk/return portfolio of assets to achieve a target return on equity. Again, if regulators want to constrain the rate of growth of lending, it appears that direct credit controls are better.

On the other hand, there is not much that can be done to encourage banks to lend when they do not want to. That is the old “you cannot push on a string” argument, and it describes the current situation quite well. Nor should government policy try to get banks to make loans they do not want to make! After all, if banks are our underwriters, and if their assessment is that there are no good loans to be made, then we should trust their judgment. In that case, lending is not the way to stimulate aggregate demand to get the economy to move toward fuller employment. Instead, fiscal policy is the way to do it.

Solving the Smithian problem requires direct oversight of bank activity mostly on the asset side of their 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 because he wanted private institutions to be “in the bank”—that is, to be debtors to the Fed. As a creditor, the Fed would be able to ask the banker 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 generate ability of 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 (for example, a bank might be able to borrow one hundred cents on the dollar against government debt but only seventy-five cents against a dollar of mortgages). Collateral requirements and haircuts can be used to discipline banks—to influence the kinds of assets they purchase. Examination of the bank’s books also allows the Fed to look for risky practices and to keep abreast of developments. It is clear that the Fed was caught with its pants down, so to speak, by the crisis that began in 2007 in part because it mostly supplied reserves in open market operations rather than at the discount window. Forcing private banks “into the bank” gives the Fed more leverage over their activities. For this reason Minsky opposed the Treasury’s proposal to strip the Fed of some of its responsibilities for regulation and oversight of institutions. If anything, Minsky would have increased the Fed’s role and would use the discount window as an important tool for oversight.

His views are relevant to current discussions about the creation of the “super” systemic regulator, and he probably would have sided with those who want to increase the Fed’s power. He also believed that because “a central bank needs to have business, supervisory, and examination relations with banks and markets if it is to be knowledgeable about what is happening,” reducing its responsibility for examining and supervising banks would also inhibit its “ability to perform its monetary policy function. This is so because monetary policy operations are constrained by the Federal Reserve’s views of the effect such operations would have upon bank activities and market stability” (Minsky 1992d: 10). The Fed would be better informed to the extent that it supervised and examined banks.

Minsky worried that the trend to 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 capital base, big banks have a natural affinity for the “big deals,” while small banks service smaller clients: “A one-billion-dollar bank may well have eighty-million dollars in capital. It

therefore would have an eight- to twelve-million dollar maximum line of credit [...] in the United States context this means the normal client for such banks is a community or smaller business: such banks are small business development corporations” (Minsky 1992d: 12).

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, in many communities there are far more check-cashing outlets and pawnshops than bank offices. Many households do not even have checking accounts. Small businesses often finance activities using credit card debt. Hence, the proposal would have created a network of small community development banks to provide a full range of services (a sort of universal bank for underserved communities), such as: 1) a payment system for check cashing and clearing, and credit and debit cards; 2) secure depositories for savings and transactions balances; 3) household financing for housing, consumer debts, and student loans; 4) commercial banking services for loans, payroll services, and advice; 5) investment banking services for determining the appropriate liability structure for the assets of a firm, and placing these 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; one example of its composition would be: a) a narrow bank to provide payments services; b) a commercial bank to provide loans to firms and mortgages to households; c) an investment bank to intermediate equity issues and long-term debt of firms; and d) a trust bank to act as a trustee and to provide financial advice.

Reform of the financial system does need to address the “shadow banks” of money manager capitalism. Minsky believed, as discussed above, that pension funds were largely responsible for the LBO boom (and bust) of the 1980s; similarly there is

strong evidence that pension funds drove the commodities boom and bust of the mid-2000s. To be sure, this is just a part of managed money, but it is a government-protected and supported portion—both because it gets favorable tax treatment and because it has a quasi-government backing through the Pension Benefit Guarantee Corporation (see Nersisyan and Wray [2010]). Hence, it is yet another public-private partnership that ought to serve the public purpose. Minsky wondered “Should the power of pension funds be attenuated by having open ended IRA’s? (No limit to contributions, withdrawals without penalty, but all withdrawals taxed, interest and dividend accruals not taxed except as they are spent)” (Minsky 1992a: 35). The IRAs would compete with pension fund managers, reducing their influence.

Finally, returning to Minsky’s views on the role that financial institutions play in forcing and allocating a surplus, he would certainly be appalled at recent trends. First, there has been an important shift away from the wage share and toward gross capital income. I will not go into all the implications of this, but it is clear that stagnant wages played a role in promoting growth of household indebtedness over the past three decades, with rapid acceleration since the mid-1990s. As many at the Levy Institute have been arguing since 1996, the shift to a private sector deficit that was unprecedentedly large and persistent would prove to be unsustainable. The mountains of debt still crushing households is in part due to the shift of national income away from wages as households tried to maintain living standards. Equally problematic is the allocation of profits toward the financial sector—just before the crisis, the FIRE sector got 40% of all corporate profits and its share has returned to that level. This contrasts with a 10 to 15% share until the 1970s, and a 20% share until the 1990s. While value added by the FIRE sector also grew, from about 12% in the early postwar period to nearly 20% today, its share of profits was twice as high as its share of value added by the time of the 2000s bubble. Hence there are three interrelated problems: the surplus forced by the financial sector is probably too large, the share of GDP coming from the financial sector is probably too large, and the share of the surplus allocated by the financial sector to itself is far too large. Downsizing finance is necessary to ensure that the capital development of the economy can be well done. With 40% of corporate profits going to finance, not only does

this leave too little to other sectors, but it encourages entrepreneurial effort and innovations to be directed to the financial sector.

CONCLUSION

Over past decades the belief that “markets work to promote the public interest” gained in popularity. Minsky questioned: but what if they don’t. Then a system of constraints and interventions can work better. He also believed that we need to make “industry” dominate over “speculation” (recalling Keynes’s famous dichotomy), and not vice versa, or the capital development of the economy will be ill done in two ways: the Smithian/Neoclassical way or the Keynes/aggregate demand way. If investment is misdirected, we not only waste resources, but we get boom and bust. If investment is too low, we not only suffer from unemployment, but also profits are too low to support commitments—leading to default. Further, when profits are low in “industry” then problems arise in the financial sector because 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. The Smithian ideal is that debt deflations are not endogenous, rather they must result from exogenous factors, including too much government regulation and intervention, so the solution is deregulation, downsizing government, tax cuts, and making markets more flexible. The Keynesian view is that the financial structure is transformed over a run of good times from a robust to a fragile state as a result of the natural reaction of agents to the successful operation of the economy. If policymakers understood this, they could formulate policy to attenuate the transformation—and then to deal with a crisis when it occurs.

REFERENCES

- Black, William K. 2005. *The Best Way to Rob a Bank is to Own One: How corporate executives and politicians looted the S&L industry*. Austin: University of Texas Press.
- Bookstaber, Richard. 2007. *A Demon of Our Own Design: Markets, Hedge Funds, and the Risks of Financial Innovation*. Hoboken, NJ: John Wiley and Sons.
- Das, Satyajit. 2006. *Traders, Guns & Money: Knowns and unknowns in the dazzling world of derivatives*. Upper Saddle River, NJ: Financial Times Prentice Hall.
- Galbraith, John Kenneth. 2009 (1954). *The Great Crash 1929*. New York: Houghton Mifflin Harcourt, Publishers.
- Kregel, Jan. 2008. "Minsky's Cushions of Safety: Systemic Risk and the Crisis in the U.S. Subprime Mortgage Market." Public Policy Brief 93, January. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Mayer, Martin. 2010. "The spectre of banking." One-Pager No. 3, May 20. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Minsky, Hyman P. 1996a. "Uncertainty and the Institutional Structure of Capitalist Economies: remarks upon receiving the Veblen-Commons Award." *Journal of Economic Issues* XXX(2): 357–368.
- . 1996b. "Uncertainty and the Institutional Structure of Capitalist Economies", Working Paper 155. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- . 1993a. "The Essential Characteristics of Post-Keynesian Economics." Unpublished manuscript, April 13. From the Minsky Archives at the Levy Economics Institute of Bard College.
- . 1993b. "Financial Structure and the Financing of the Capital Development of the Economy." The Jerome Levy Institute Presents Proposals for Reform of the Financial System, Corpus Christie, TX April 23.
- . 1992a. "Reconstituting the United States' Financial Structure: Some fundamental issues." Working Paper 69. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- . 1992b. "The Capital Development of the Economy and the Structure of Financial Institutions." Working Paper 72. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.

- . 1992c. “The Economic Problem at the End of the Second Millennium: Creating capitalism, reforming capitalism and making capitalism work.” (prospective chapter) May 13.
- . 1992d. “Reconstituting the Financial Structure: The United States” (prospective chapter, four parts) May 13.
- . 1986. *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press.
- Minsky, Hyman P., Dimitri B. Papadimitriou, Ronnie J. Phillips, and L. Randall Wray. 1993. “Community Development Banking: A Proposal to Establish a Nationwide System of Community Development Banks.” Public Policy Brief 3. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Minsky, Hyman P., and Charles J. Whalen. 1996. “Economic Insecurity and the Institutional Prerequisites for Successful Capitalism.” Working Paper 165 Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Nersisyan, Yeva, and L. Randall Wray. 2010. “The Trouble with Pensions.” Public Policy Brief 109, March. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Wray, L. Randall. 2008a. “Financial Markets Meltdown: What Can We Learn from Minsky?” Public Policy Brief 94, April Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- . 2008b. “The Commodities Market Bubble: Money Manager Capitalism and the Financialization of Commodities.” Public Policy Brief 96, October. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- . 2010. “Minsky’s Money Manager Capitalism and the Global Financial Crisis.” manuscript.