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Financial Keynesianism and Market Instability*

by

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ABSTRACT

In this paper I will follow Hyman Minsky in arguing that the postwar period has seen a slow transformation of the economy from a structure that could be characterized as "robust" to one that is "fragile." While many economists and policymakers have argued that "no one saw it coming," Minsky and his followers certainly did! While some of the details might have surprised Minsky, certainly the general contours of this crisis were foreseen by him a half century ago. I will focus on two main points: first, the past four decades have seen the return of "finance capitalism"; and second, the collapse that began two years ago is a classic "Fisher-Minsky" debt deflation. The appropriate way to analyze this transformation and collapse is from the perspective of what Minsky called "financial Keynesianism"—a label he preferred over Post Keynesian because it emphasized the financial nature of the capitalist economy he analyzed.

Keywords: Hyman Minsky, Fisher-Minsky Debt Deflation, Hilferding, Finance Capitalism, Money Manager Capitalism, Financial Keynesian

JEL Classifications: B22; B25; B26; B52; E02; E11; E12; E44; G01; G18; G20; G21

INTRODUCTION

Minsky liked to call his approach "financial Keynesian," rather than "Post Keynesian" because this better reflected his extensions of Keynes's *General Theory*. All over the globe many are proclaiming the "return of Keynes," but I think that Minsky would find many of the analyses invoking Keynes's name to be deficient. Yes, economists and policymakers have rediscovered Keynes's chapter 12 argument that economies can be caught up in "whirlwinds" of euphoric expectations. Thus, they have turned against "efficient markets" beliefs that asset prices always reflect fundamentals. Many have called for some re-regulation of the financial sector. And most economists and policymakers have become "Keynesian in the trenches," arguing for fiscal stimulus packages. Minsky would welcome these developments, but he would want more.

Minsky always insisted that there are two essential propositions of his "financial instability hypothesis." The first is that there are two financing "regimes"—one that is consistent with stability and the other that subjects the economy to instability. The second proposition is that "stability is destabilizing," so that endogenous processes will tend to move even a stable system toward fragility. While Minsky is best known for his analysis of crises, he argued that the strongest force in a modern capitalist economy operates in the other direction—toward an unconstrained speculative boom. The current crisis is a natural outcome of these processes—an unsustainable explosion of real estate prices, mortgage debt, and leveraged positions in collateralized securities and derivatives in conjunction with a similarly unsustainable explosion of commodities prices. Add to the mix an overly tight fiscal policy (so that growth required private sector deficits) and the crisis was not hard to see coming (Wray 2003).

Hence, the problem is the rise of what Minsky called money manager capitalism—the modern form of the previous stage of finance capitalism that self-destructed in the Great Depression of the 1930s. He characterized money manger capitalism as one dominated by highly leveraged funds seeking maximum returns in an environment that systematically underprices risk. With little regulation or supervision of financial institutions, money managers concocted increasingly esoteric and opaque financial instruments that quickly spread around the world. Contrary to economic theory,

markets generate perverse incentives for excess risk, punishing managers to take on ever more risk. Those playing along are rewarded with high returns because highly leveraged funding drives up prices for the underlying assets. We are now living with the aftermath as positions are delevered, driving prices of the underlying collateral (homes, commodities, factories) down—the debt deflation.

Previous to WWII, debt deflations operated quickly. As Minsky liked to point out, in the Great Depression asset prices fell by 85%. However, in our postwar period, big government (Treasury) and big bank (central bank) slow the self-reinforcing processes. As the experience of Japan has taught us, a debt-deflation process can now unfold over a period of decades, rather than months. On the one hand, this allows us to avoid the worst consequences—in the United States, the official unemployment rate has only breeched 10%, not a 1930s-like 25%. On the other hand, it can mean that the economy might stumble along for an entire generation. This fuels the belief—now common in the United States—that the economy is already on the road to recovery. That, in turn, makes it much harder to undertake the fundamental reforms that are necessary.

Minsky would therefore recommend a more radical approach to dealing with the crisis. Some within the Obama administration have remarked several times that a crisis offers the opportunity for major change—yet it has not yet taken any such action. I will provide some policy recommendations that I think are consistent with Minsky's policy proposals. Unfortunately, such radical reforms are not likely to be pursued until the financial system collapses again—perhaps a bigger crash than that witnessed in the summer and fall of 2008 will be needed. I do believe that such a scenario is highly plausible. Unlike the case of Japan—which could stumble along for decades, relying on its trading partners to inject needed demand—the United States is the world's buyer of last resort. It will not get help from abroad, but rather will drag much of the world down when it crashes.

Minsky (1986) argued that the Great Depression represented a failure of the small-government, laissez-faire economic model, while the New Deal promoted a big government/big bank highly successful model for capitalism. The current crisis just as convincingly represents a failure of the big government/neoconservative (or, outside the United States, what is called neoliberal) model that promotes deregulation, reduced

supervision and oversight, privatization, and consolidation of market power. It replaced the New Deal reforms with self-supervision of markets, with greater reliance on "personal responsibility" as safety nets were shredded, and with monetary and fiscal policy that is biased against maintenance of full employment and adequate growth to generate rising living standards for most Americans (see Wray 2000, 2005a).

Hence we must use this opportunity to return to a more sensible model, with enhanced oversight of financial institutions and with a financial structure that promotes stability rather than speculation. We need policy that promotes rising wages for the bottom half so that borrowing is less necessary to achieve middle-class living standards. And policy that promotes employment, rather than transfer payments—or worse, incarceration—for those left behind. Monetary policy must be turned away from using rate hikes to preempt inflation and toward a proper role: stabilizing interest rates, direct credit controls to prevent runaway speculation, and supervision. Fiscal policy will need to play a bigger role in the future, providing a larger share of aggregate demand; only government can operate against the boom and bust trend that is natural for the private sector. This crisis has shown the folly of relying on monetary policy to "fine-tune" the economy—something we understood quite well in the early postwar period.

THE RISE OF MONEY MANAGERS

In the United States (and in the developed world, more generally) there has been a long-term transition away from relatively tightly regulated banking toward "market-based" financial institutions. Two decades ago there was a lot of discussion of the benefits of the "universal banking" model adopted abroad (Germany, Japan), and there was some movement in the United States in that direction. However, of far greater importance was the development of the "originate to distribute" model best represented by securitization, and use of "off-balance sheet" operations. Ironically, the push to increase safety and soundness through creation of international standards in the Basle agreements actually encouraged these developments—which as we now know greatly increased systemic risk. One of the most important results was the incentive to move assets off bank balance

sheets in order to reduce capital requirements. If assets did not need to be counted, leverage ratios could rise tremendously.

Modern securitization of home mortgages began in the early 1980s. While securitization is usually presented as a technological innovation to diversify and spread risk, in reality—as Minsky (2008 [1987]) argued—it was a response to policy initiated by Chairman Volcker in 1979 (see also Kuttner 2007). This was the infamous experiment in monetarism, during which the Fed purportedly targeted money growth to fight inflation—pushing the fed funds rate above 20% (Wray 1994). If the Fed was willing to raise rates that much, no financial institution could afford to be stuck with long-term fixed-rate mortgages. The long-term consequence was the recognition that the mortgage "market" had to change—with banks and thrifts shifting assets off their books through securitization. Minsky (2008 [1987]) was one of the few commentators who understood the true potential of securitization. In principle, most bank assets could be packaged into a variety of risk classes, with differential pricing to cover risk. Investors could choose the desired risk-return trade-off. Financial institutions would earn fee income for loan origination, for assessing risk, and for servicing loans. Wall Street banks would place the collateralized debt obligations (CDOs), slicing and dicing to suit the needs of money managers.

Minsky (2008 [1987]) argued that securitization reflected two additional developments. First, it contributed to the globalization of finance, as securitization creates assets freed from national boundaries. As Minsky argued, the post-WWII depression-free expansion in the developed world (and even in much of the developing world) created a global pool of managed money seeking returns. While there were periodic recessions and financial crises, these were not sufficiently serious to wipe-out portfolios through a debt-deflation process. Packaged securities were appealing for global investors trying to achieve the desired proportion of assets denominated in the major currencies.

The second development is the relative decline of the importance of banks in favor of "markets." (The bank share of US financial assets fell from around 50% in the 1950s to around 25% in the 1990s.) This was encouraged by the experiment in Monetarism, but it was also fueled by continual erosion of the portion of the financial sphere that had been allocated by rules, regulations, and tradition to banks. The growth of

competition on both sides of banking business—checkable deposits at nonbank financial institutions that could pay market interest rates and rise of the commercial paper market that allowed firms to bypass commercial banks—squeezed the profitability of banking. Financial markets can operate with much lower spreads and much higher leverage ratios precisely because they are exempt from required reserve ratios, regulated capital requirements, and much of the costs of relationship banking. Since banks could not beat financial markets at this game, they had to join them. Hence, the constraints imposed by the Glass-Steagall Act were gradually eroded and then removed altogether in 1999.

The following graph shows the decline of banking and the relative increase of other portions of the financial system. By far the most important change has been the rise of "managed money," which includes pension funds, sovereign wealth funds, hedge funds, university endowments, mutual funds, and similar pools of managed money.

The biggest losers were commercial banks and thrifts. To restore profitability banks and thrifts would earn fee income for loan origination, but by moving the mortgages off their books they could escape reserve and capital requirements. As Minsky (2008 [1987]) argued, investment banks would pay ratings agencies to bless the securities, and hire economists to develop models to demonstrate that interest earnings

would more than compensate for risks. They served as credit enhancers, certifying that prospective defaults on subprimes would be little different from those on conventional mortgages—so that the subprime-backed securities could receive the investment-grade rating required by pension funds. Later, other "credit enhancements" were added, such as buy-back guarantees in the event of capital losses due to unexpectedly high delinquencies and foreclosures—the latter became important when the crisis hit because the risks came right back to banks due to the guarantees. One other credit enhancement played an essential role—insurance on the securities, sold by "monoline" insurers. More importantly, credit default swaps were sold as insurance, most disastrously by AIG. This became little more than pure gambling, with institutions like Goldman Sachs packaging junk mortgages into junkier securities, then purchasing CDSs from AIG to bet that the securities would go bad. Goldman then pushed AIG into default by demanding payment on securities that the bank claimed were toxic. As the crisis unfolded, the monoline insurers were downgraded, which automatically led to downgrading of the securities they insured—which then forced CDS sellers to cover losses, forcing them to default—a nice vicious cycle that played to the advantage of Goldman and other investment banks.

PENSION FUNDS AND MANAGED MONEY

Not enough attention has been given to the role played by pension funds in fueling the asset price boom and subsequent bust. In the immediate postwar period, private pensions held nearly 60% of their assets in treasuries and almost all the rest in corporate and foreign bonds. However, treasuries were sold off and corporate bonds were replaced largely with equities over the course of the 1960s. In recent years, equities plus mutual funds (indirect ownership of equities) amounted for the vast majority of holdings. The total volumes of pension funds grew rapidly over the postwar period and are now huge relative to the size of the economy (and relative to the size of financial assets). Private pension funds are about half of United States GDP, while public (state and local government) pension funds are another 20%.

The crisis and recent decline of asset values both in absolute terms as well as relative to GDP have been historically large. Private plans lost about $1.79 trillion on

their financial assets between 2007 and 2008, with their positions in equities and mutual fund shares losing $1.82 trillion. As a share of GDP, private pensions fell by nearly fourteen percentage points between 2007 and 2008. The Millman 100 Pension Funding Index, which tracks the state of the nation's 100 largest defined benefit plans, reported a decline in the funding ratio from 99.6% to 71.7%. Public plans fell by about nine percentage points of GDP. Individual retirement accounts (another form of tax-advantaged retirement savings) have lost another $1.1 trillion, bringing total losses of private retirement funds to about $2.9 trillion (Flow of Funds Accounts).

Of course, it is not surprising to learn that pension funds suffer when financial markets crash. It is important to understand, however, that this is a two-way street: pension funds have become so large that they are capable of literally "moving markets." As they flow into a new class of assets, the sheer volume of funds under management will tend to cause prices to rise. Pension funds often follow an allocation strategy devoting a designated percent of funds to a particular asset class. This takes the form of "follow the leader" as the popularity of investing in a new asset class increases. This pushes up prices, rewarding the decision so that managers further increase the allocation to well-performing classes of assets. This adds fuel to a speculative bubble. Of course, trying to reverse flows—to move out of a class of assets—will cause prices to fall, rapidly, as Fisher debt-deflation dynamics are initiated.

A good example is the commodities boom and bust during the 2000s (which to some extent reversed into the recent boomlet that might be coming to an end). As I explained in Wray (2008b) the deregulation at the end of the 1990s allowed pension managers to go into commodities for the first time. Previously, pensions could not buy commodities because these are purely speculative bets. There is no return to holding commodities unless their prices rise—indeed, holding them is costly. However, Goldman Sachs (which created one of the two largest indexes) and others promoted investment in commodities as a hedge, on the argument that commodities prices are uncorrelated with equities. In the aftermath of the dot-com collapse, that was appealing. In truth, when managed money flows into an asset class that had previously been uncorrelated with other assets, that asset will become correlated. For example, an equities boom that causes share prices to appear overvalued can generate a commodities boom as pensions

diversify. Hence, by marketing commodities indexes as uncorrelated assets, a commodities bubble ensued that would collapse along with everything else. This is because when one asset class collapses—say, securitized mortgages—holders need to come up with cash and collateral to cover losses, which causes them to sell holdings in other asset classes. This is why silver and cattle became correlated when the Hunt Brothers' attempt to corner the silver market failed, as they had to sell cows to cover losses on silver.

I will not repeat my previous analysis (Wray [2008b], which closely followed the work of Michael Masters—who exposed the role played by "index speculators" in the commodities price boom), but in brief, most of the position taken was actually in commodities futures indexes as pension funds decided to allocate, say, 5% of assets under management to commodities. However, there is a close link between index prices and spot prices—so the rising futures prices led to appreciating spot prices. While pensions only allocated a small proportion of portfolios to these indexes, this amounted to a huge volume relative to the size of commodities markets. For example, Masters showed that the allocation by pension funds (and other index speculators—with pensions accounting for about 85% of all index speculation) to oil was equivalent to the total growth of Chinese demand for oil for the half decade after 2004. Index and spot prices literally exploded, in what was probably the biggest commodities price bubble ever experienced.

The bubble was also assisted by a policy change: as pension funds poured into commodities and commodity futures, driving up prices of energy, metals, and food and as energy prices rose, the US Congress mandated biofuels use—which added to pressures on food prices that contributed to starvation around the globe. When pensions started to move out in the late summer and fall of 2008, prices collapsed (they moved about a third of their funds out; oil prices fell from about $150 a barrel to $40). Because other asset classes performed poorly through 2009, pensions eventually moved back in, and commodities prices regained some ground (oil prices doubled from the trough—but still barely exceeded half their peak price). While it is too early to tell, it looks like the little boomlet may have come to an end—probably not because pensions have moved out yet, but rather because demand for the actual commodities remains sluggish in the face of the

global downturn. The point is, however, that pension funds are big enough to destabilize asset prices. If they should turn tail and run out of commodities, prices would again collapse.

More generally, pension funds are part of what Minsky called managed money, and it could be argued that the global financial crisis really resulted from the way that managed money operates as huge flows of money under management have built up over the postwar period. These seek the highest total return, and in some cases (especially hedge funds) use high leverage ratios to increase return. Innovation plus leverage led to exceedingly risky positions in assets that finally collapsed, beginning in the market for securitized subprime loans. Pensions are just one component of managed money, of course, but they are government subsidized and protected: tax advantages are offered for retirement savings, and the government guarantees pensions (through a public corporation, the Pension Benefit Guarantee Corporation, that operates much like FDIC—the insurer of bank deposits). In other words, pension funds are in an important sense a creature that owes its existence to government, and that competes with another creature of government, commercial banking. The competition between managed money on the one hand (including pensions) and banking on the other is what helped to produce the current crisis.

What is most important to see is that commercial banking was becoming increasingly irrelevant—as were other traditional lines of business such as thrifts and credit unions. Securitized products (agency and GSE pools included) plus managed money had taken over. Just before the current global crisis hit, pension funding was, on average, doing well—thanks to the speculative bubble. The crash caused the current underfunding. To restore funding levels, pensions need a new bubble. Indeed, pensions are looking into placing bets on death through the so-called life settlements market (securitized life insurance policies that pay-off when people die early) (Auerback and Wray 2010). Ironically, this would be a sort of doubling down on death of retirees—since early death reduces the amount of time that pensions have to be paid, even as it increases pension fund assets.

To conclude, pension funds are so large that they will bubble-up any financial market they are allowed to enter—and what goes up must come down. The problem

really is that managed money, taken as a whole, is simply too large to be supported by the nation's ability to produce output and income necessary to provide a foundation for the financial assets and debts that exist even in the aftermath of the financial crisis. Hence, returns cannot be obtained by making loans against production (or even income) but rather can be generated only by "financialization"—or layering and leveraging existing levels of production and income. This is why the ratio of financial assets and debts grows continually—and why managed money has to continually innovate new kinds of assets in which to speculate.

FINANCIALIZATION AND DEBT

The other side of the asset management coin is the massive growth of private sector debt. The following graph is instructive, showing growth of debt that is much faster than growth of GDP.

There has been a long-term trend toward growing indebtedness. But what is striking is the very rapid growth of financial sector indebtedness over the past quarter century—from a fifth of GDP to 120% of GDP. This represents a leveraging or layering of financial commitments on top of national income flows. The growth of securitization

led to a tremendous increase of leverage ratios—typically at least 15-to-1 and often much greater—with the owners (for example, hedge funds) putting up very little of their own money while issuing potentially volatile commercial paper or other liabilities to fund positions in the securities. The relative economic stability of the postwar period encouraged financial innovations that "stretched liquidity" in Minsky's terminology; this, plus competition, spurred financial institutions to increase leverage ratios, increasing credit availability. This is because for given expected losses, higher leverage raises return on equity. With easy credit, asset prices could be bid up, and rising prices encouraged yet more innovation and competition to further increase leverage. Innovations expanded loan supply, fueled home-buying, and drove up the value of real estate, which increased the size of loans required and justified rising leverage ratios (loan-to-value and loan-to-income) since homes could always be refinanced or sold later at higher prices if problems developed. The virtuous cycle ensured that the financial system would move through the structures that Minsky labeled hedge, speculative, and finally Ponzi—which requires asset price appreciation to validate it. Indeed, the virtuous cycle made Ponzi position-taking nearly inevitable. Many or most of the mortgages made in the 2000s were Ponzi from the beginning—incomes were overstated and it was often expected that the homes would be "flipped" (sold at a profit) or that better financial terms would be negotiated later.

The Ponzi phase would end only if rates rose or prices stopped rising. Of course, both events were inevitable, indeed, were dynamically linked because Fed rate hikes would slow speculation, attenuating rising property values, and increasing risk spreads. When losses on subprimes began to exceed expectations based on historical experience, prices of securities began to fall. Problems spread to other markets, including money market mutual funds and commercial paper markets, and banks became reluctant to lend even for short periods. With big leverage ratios, money managers faced huge losses greatly exceeding their capital, and began to deleverage by selling, putting more downward pressure on prices.

As the subprime market unraveled, fears spread to other asset-backed securities, including commercial real estate loans, and to other bond markets such as that for municipal bonds. Markets recognized that there were systemic problems with the credit

ratings assigned by the credit ratings agencies. Further, they realized that if mortgage-backed securities, other asset-backed securities, and muni bonds are riskier than previously believed, then the insurers will have greater than expected losses. Ratings agencies downgraded the credit ratings of the insurers. As the financial position of insurers was questioned, the insurance that guaranteed the assets became worthless—so the ratings on bonds and securities were downgraded. In many cases, investment banks had a piece of this action, holding the worst of the securities, and they had promised to take back mortgages or had positions in the insurers that became insolvent.

Government was able to resolve the liquidity crisis, and propped up financial institutions by taking bad assets and guaranteeing others. Some estimates of total purchases, loans, and guarantees are above $20 trillion. More importantly, government adopted "forbearance"—allowing insolvent institutions to remain open, just as it did during the 1980s when the entire thrift industry was massively insolvent. As we discovered, during that period, the thrifts "bet the bank," making extremely risky loans that greatly increased their insolvency, leading to a costly government bail-out. It is almost certain that banks today are making the same gamble. The biggest banks are announcing huge profits and are paying out nearly record bonuses (obviously the two phenomena are linked because if losses were recognized it would be harder to justify the bonuses). However, closer scrutiny shows that banks are not reporting significant profits on lending, rather, it is the trading business that is generating profits. The thrift fiasco showed how easy it is to manufacture fake profits: I sell you my bad assets at an inflated price, and you sell me yours. And since that produces "market prices" that are high, we can each book higher prices for all the toxic waste assets that we are holding on our books.

Meanwhile the true values of assets are plummeting because delinquency rates and default rates are exploding across all types of assets: residential real estate, commercial real estate, credit cards, auto loans and leases, junk bonds (optimistically called high-yield), home equity loans, and so on. Even some mainstream economists are beginning to argue that the situation of banks today is actually worse than it was in 2007. If so, another big crash is likely. Even if that does not occur, it is very difficult to see where recovery can come from. The US labor market is not expected to recover for years.

Euroland looks poised for another financial crash—this one homegrown as Greece, Portugal, Spain, and possibly Italy appear close to default on government debt (and as Ireland's crisis seems to have returned). Japan has slipped back into deep recession—and Toyota's problems with recalls will not help. While the "BRICs" (Brazil, Russia, India, and China) look good at the end of 2010, I believe that only China is prepared to deal with the problems that will be created if both the United States and Euroland collapse.

FINANCIAL KEYNESIAN POLICIES TO PROMOTE STABILITY

In addition to destroying the "efficient markets" myth, the global financial crisis also put to rest the belief that central banks can "fine-tune" the economy. While most central bankers reacted to the crisis by lowering interest rates, there is no evidence that did anything. Japan's long experience with near-zero interest rates should already have disproven the New Monetary Consensus, however economists always argued that for some reason Japan was a special case from which no lessons could be learned. (See the following chart, which shows that the United States is following in Japan's footsteps.) Further, Bernanke convinced markets that he would go further, with "quantitative easing" (QE) that turned out to be little but a slogan. It never worked—it simply stuffed banks full of excess reserves. Even the NY Fed concluded that the first phase of QE lowered long-term interest rates by perhaps 50 basis points; extrapolating to QE2 the effect would be expected to total less than another 20 basis points. Only 70 basis points of reduction after nearly $2.4 trillion of asset purchases by the Fed! That is impotence on a grand scale.

Sources: Bank of Japan and Federal Reserve Bank of St. Louis Federal Reserve Economic Database

In truth, interest rate cuts cannot do much, anyway, to restore economic growth, nor to quell financial market unrest. This does not mean that rate cuts are unwarranted, but they will not be effective. And it must be remembered that lower rates mean lower interest income. That will become important as government debt grows relative to GDP. In the case of Japan, I had always argued that raising rates would actually increase the fiscal stimulus, by increasing earnings on government debt. Unfortunately, just as Japan had embarked on an experiment of raising rates, it was hit by the global financial crisis.

While the US fiscal stimulus package (as well as packages adopted in much of the developed world) helped to put a floor on the downturn, it was simply too timid for the task at hand. And while it had some impact, it is now running out of steam, and deficit fears as well as populist anger over the bail-out of Wall Street will prevent the President and Congress from enacting another one of significant size.

How big should it be? That is not the right way to go about answering this question. There is no magic number for government spending, no single deficit-to-GDP

ratio that will ensure recovery. Indeed, as Japan's long experience indicates, large budget deficits can occur even with economic stagnation. (See the following chart, which shows that the United States is on track to follow Japan's example.) The reason is that deficits can be created in response to destruction of tax revenue by a recession or by proactive fiscal stimulus policies that will put the economy on a path to recovery. We can call the first of these the "ugly way"; the second is the right way. Unfortunately, both the Japanese deficits as well as President Obama's deficits have mostly resulted the ugly way. And, unfortunately, politics usually dictates that policy will pursue the ugly strategy. Even during the Great Depression, policy was never stimulative enough to generate recovery; it was WWII spending that finally turned things around. One can hope that we will not have to wait for either another great depression or another world war before policymakers will pursue deficits the "right way" through a proactive fiscal stimulus of the appropriate size. We will know it when we see it because jobs will start to be created on a scale that will do some good—something like 300,000 per month on a sustained basis. Obviously, we are not likely to see that anytime soon.

Source: OECD and Federal Reserve Bank of St. Louis Federal Reserve Economic Database

I believe that continuing asset price deflation will wipe out several trillion more dollars of wealth in the United States alone. House prices will likely continue to fall; some projections now show that half of all mortgages will be underwater (mortgage greater than value of the house) before the real estate crisis ends. Millions more households will lose or voluntarily give up their homes. A similar story is unfolding throughout the consumer credit sector—credit cards, autos, student loans. The commercial real estate sector crisis is just now getting underway in a serious manner. As should be clear from the analysis above, the answer is not just to deal with the asset price deflation, but also to prevent another asset price inflation. Managed money is exploring commodities, death settlements, "peasant insurance" (firms take out life insurance policies on employees and hope for early death), and the cap-and-trade (in carbon) as possible avenues for speculative bubbles. Should they manage to produce another bubble, we can be sure that it will collapse sooner rather than later for the simple reason that with

employment and income depressed, additional leverage and layering of financial assets on top of already burdened households and firms cannot be supported for long.

We will need debt relief for burdened homeowners and other indebted households. This is not the place for a detailed plan—many have been floated—but any real solution will require some combination of debt write-downs (meaning losses for financial institution owners), negotiation of better terms (rolling ARMs into fixed, low-rate mortgages), and government assumption of troubled mortgages and student loans. In addition, I would follow Minsky's proposal made in the wake of the S&L fiasco to create an RFC-type institution to purchase and hold mortgages until the real estate sector recovers; Roosevelt's Homeowners Loan Corporation provides a model that can be followed. This is the way to support homeownership without bailing out owners of the private financial institutions that created the mess.

While reforms have been proposed for Fannie Mae and Freddie Mac, both are saddled with a tremendous amount of bad debt while they are required to appease markets that are uncertain government really stands behind them. Sallie Mae is in even worse shape. The best course of action would be to completely nationalize them and for the Treasury to explicitly guarantee their debts, to directly fund additional debt, and to increase oversight and supervision of activities to ensure they operate in the public interest. With leverage ratios as high as 65-to-1, the GSEs represent both a risk that more bail-outs will be needed as well as a risk to regulated for-profit financial institutions that are required to operate with lower leverage. Congress needs to rethink the role to be played by the GSEs in the home-finance sector. It will be better for them to return to a role of supporting private lenders rather than competing with them.

This leaves us with the biggest policy challenge: what to do about what Minsky called money manager capitalism, characterized by vast accumulations of funds under management by pension funds, insurance funds, and hedge funds (Minsky 2008 [1987]). If a depression and worse debt deflation can be avoided, money managers are certain to create another asset price boom that will renew and extend all of the financial practices that caused the current crisis. Financial markets have a short memory that will allow the risky practices to come back even more virulently, spreading into new areas. The only way to prevent that is to re-regulate and to downsize. Memories will be improved if

losses are huge, and if most of those now working in financial markets are never allowed to return to the financial sector.

To be sure, government has no legitimate interest in eliminating all risky practices. There is a place for managed money pursuing the highest returns even at the cost of high probability of catastrophic failure that wipes out private wealth. By the same token, there *is* a public interest in maintaining safety and soundness of at least a portion of the banking, student loan, and home mortgage sectors, as well as of pension and insurance funds. Given implicit and explicit government guarantees behind many of the liabilities of these regulated sectors, there is a justification for close regulation and supervision of activities. Insured banking deposits are explicit Treasury liabilities (FDIC "insurance" is not sufficient, as we learned when the S&L crisis brought down FSLIC), and uninsured bank liabilities have been treated as implicit Treasury liabilities in the case of banks considered "too big to fail" (which today includes the issuers of most of the *volume* of liabilities). Only owner equity is at risk—and often even that is not really at risk because the "too big to fail" rescue usually comes down on the side of politics rather than economic considerations. Hence, it is legitimate to prohibit activities considered to be too risky or otherwise against the public interest.

In recent years, much of the change made to bank regulations has been based on a flawed view of the proper role of banks—the goal has been to allow banks to become more "market oriented." For example, there has been a growing belief that bank assets should be "marked to market," even on a daily basis. In a boom, this generates exceedingly risky behavior as the market discounts default probabilities, permitting banks to participate in euphoric speculation that raises market value of risky assets. In a bust, banks see asset prices plummeting and are forced to recognize "marked to market" losses, and even to sell into declining markets to push prices down further. Such behavior is precisely the opposite of the behavior that policy ought to encourage. While we cannot and should not go back to New Deal–era practices, thorough reform is needed to make it more difficult for regulated and protected banks and thrifts to participate in the next speculative boom—or to contribute to the next collapse.

Perhaps the most important way banks helped fuel the latest booms was through off-balance-sheet operations—liabilities that were hidden—including buy-back

guarantees and "special purpose vehicles." These effectively committed the Treasury (through the FDIC and likely bail-outs as rescues became necessary) to unknown risks even as they allowed protected institutions to evade rules, regulations, and guidelines designed to maintain safety and soundness. There is little justification for such practice—except that it allowed these institutions to earn extra fee income in partial compensation for allowing relatively unregulated Wall Street banks to directly compete with them. Unfortunately, legislators were duped by Alan Greenspan's free market bias into repealing New Deal legislation that separated commercial and investment banking, not recognizing that market segmentation is required if some types of institutions are going to be more closely regulated. It may be too late to go back to such segmentation, in which case the only solution is to impose similar rules and supervision across all types of institutions that are allowed to operate in the same markets. Hence, any institution involved in originating, securitizing, distributing, and holding home mortgages ought to be subject to the same constraints—including leverage limits and the requirement that *all* liabilities ought to show up on balance sheets.

With respect to commodities markets, price pressures can be relieved by dealing with the source: commodities futures purchases by managed money funds and oligopoly pricing by oil producers. The first is relatively easy to deal with—remove all tax advantages for funds that purchase commodities or indexes of commodities (both physical and "paper" futures) and prohibit purchases of such assets by funds that benefit from government guarantees (such as the Pension Benefit Guarantee Corporation). In addition, the President could, as necessary, draw down the Strategic Petroleum Reserve to increase supply in spot markets (something Democrats had tried to force through Congress during the last boom although legislation was voted down by the House). If that is not sufficient to break the oligopolies' pricing then the President must lean on allies, including Saudi Arabia. A promise by the Obama administration that it will stop pursuing a cheap dollar Mercantilist policy would help to convince oil exporters to allow prices to fall, and would encourage other net exporters to stop reallocating portfolios away from the dollar. The United States is much too large and much too rich to rely on export-led growth, as it has been trying to do in response to the crisis. In any event, the dollar's slide

seems to have reversed, and US export growth has been hurt by the slumping global economy.

Some have argued that the best way to deal with the financial sector is to raise capital ratios—this is supposed to make banks less risky for two reasons: owners have more "skin in the game" and equity is a cushion to absorb losses. I seriously doubt that higher capital ratios will do any good. There is always an incentive to increase leverage ratios or to increase risk to improve return on equity. Given that banks can finance their positions in earning assets by issuing government-guaranteed liabilities, at a capital ratio of 5% for every $100 they gamble, only $5 is their own and $95 is effectively the government's (in the form of insured deposits). In the worst case, they lose $5 of their own money; if their gamble wins, they keep all the profit. If subjected only to market forces, profit-seeking behavior under such conditions would be subject to many, and frequently spectacular, bank failures. The odds are even more in the favor of speculators if government adopts a "too big to fail" strategy—although exactly how government chooses to rescue institutions will determine the value of that "put" to the bank's owners. This is why guarantees without close supervision are bound to create problems—and raising capital ratios to 10 or 20% will not matter much: they are still gambling with $90 or $80 of government money.

Note that while the Basle agreements were supposed to increase capital requirements, the ratios were never high enough to make a real difference, and the institutions were allowed to assess the riskiness of their own assets for the purposes of calculating risk-adjusted capital ratios. If anything, the Basle agreements contributed to the financial fragility that resulted in the global collapse of the financial system. Effective capital requirements would have to be very much higher, and if they are risk-adjusted, the risk assessment must be done at arms-length by neutral parties. If we are not going to closely regulate and supervise financial institutions, capital requirements need to be very high—maybe 50%—to avoid encouraging excessively risky behavior. We used to have "double indemnity": owners of banks were personally liable for twice as much as the bank lost. That, plus prison terms for management, would perhaps give the proper incentives. Failing that, the only solution is to carefully constrain bank practices—including types of assets and liabilities allowed.

Given the depressed state of the construction industry, this would be an ideal time for the federal government to rebuild and expand the nation's neglected infrastructure. Increasing such spending would be more stimulative than tax rebates, and would be targeted to a sector that is now suffering, while at the same time increasing America's productive capacity and living standards. As the estimated infrastructure needs amount to more than $2 trillion, this sector alone could generate a large portion of the jobs and consumer demand needed to keep the economy close to full employment for the next decade. A substantial portion of the infrastructure spending could be directed toward public transportation—thereby conserving petroleum use even as the new construction and manufacturing jobs would replace those lost in the automobile sector. The time is ripe for a major restructuring of American transportation.

Much of the planning and spending for public infrastructure needs to be done at the state and local level, but it must be funded by the federal government—at least some in the form of block grants. This should be undertaken in conjunction with a New Deal–style program that would provide training, jobs, and decent wages to anyone willing to work—what Minsky and others call an employer of last resort program. This is the only way to guarantee full employment without generating a wage and price spiral, and it will provide much of the labor needed to complete the projects. Just as the New Deal jobs programs left a legacy of public buildings, dams, and trails, fruits of this program would be enjoyed for decades.

As mentioned above, jobs and incomes are critically important. There are plenty of non-profitable, even though crucial, economic activities that require labor (not just the infrastructure programs discussed above, but also social services). The CCC, WPA, and other programs of the New Deal employed millions of people, creating jobs very rapidly in extremely useful projects. In its first six years, the WPA spent $11 billion, three-quarters of that on construction and conservation projects and the remainder on community service programs. During that time, WPA employed about eight million workers. The Civilian Conservation Corps (CCC) put approximately 2.75 million unemployed young men to work to reclaim government land and forests through irrigation, soil enrichment, pest control, tree planting, fire prevention, and other conservation projects. Workers earned a dollar a day, and had to send part of their wages

home to their families. Through the National Youth Administration (NYA) the government made it possible for 1.5 million high school students and 600,000 college students to continue their education by providing them with part-time jobs to meet their expenses.

In addition to the job losses suffered during this crisis, the United States has had a chronic shortage of jobs so that many potential workers (especially males with low educational attainment) have left the labor force. There are also many millions of workers were forced to work part-time even before the crisis because they could not find a full-time job. Currently, the number of people lacking a steady full-time job is about 26 million and this number is rising rapidly—in spite of some apparent improvement to official unemployment rates. Government employment programs would resolve automatically these kinds of unemployment—providing jobs for those left behind in good economic times, and also for those who lose jobs in a downturn. In an upswing, the private sector would hire workers out of the government program. This will also further strengthen the automatic stabilizer effect of government intervention since spending on the program would be countercyclical.

The employment programs would be permanent programs rather than just available during a crisis (10 to 15 million people are left behind even in a boom). In addition, they could pay a living wage tied to productivity gains, which would help to restore the purchasing power of households that has been eroded by 35 years of stagnant real wages. This would put the growth process back on sound financial grounds—with consumption growing as real wages grow (in line with productivity to avoid fueling inflation).

This is what Minsky recommended and would go some way toward reorienting the economy toward consumption, and toward consumption financed out of wage income. Minsky always argued that a high-employment, high-wage, high-consumption economy is far more stable (Minsky 1986). Not only is greater equality good for the economy, he also argued that it supports democracy and security. Along these lines we will also need to strengthen the Social Security system for retirees so that they will not have to rely on money managers for their pensions.

In conclusion, appropriate fiscal stimulus—oriented toward job creation and restoration of public infrastructure, a rescue plan for homeowners, elimination of cheap dollar/Mercantilist policy, and removal of government-supported managed money from commodities markets will provide an effective remedy for what ails the US economy. The “big bank” Fed cannot do much more than it has already done; the rest is up to what Minsky called “big government” policy operating in the public interest. The proper role for government has been neglected for too long. Hopefully, the “hands-off” worship of the “free markets” era has run its course and sensible policy formation will enjoy a resurgence.

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