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This paper will begin with a quick overview of the causes of the Global Financial Crisis (GFC) that began in 2007. There were many contributing factors but among the most important were rising inequality and stagnant incomes for most workers in America, growing private sector debt in the US and many other countries, financialization of the global economy (itself a very complex process), deregulation and de-supervision of financial institutions, and overly tight fiscal policy in many nations. We then move to an examination of the US government’s bail-out of the global financial system. While other governments played a role (some smaller governments bailed-out their own financial institutions, and the UK government as well as the European Central Bank—ECB—assisted institutions across borders), the US Treasury and the Federal Reserve Bank (Fed) assumed much of the responsibility for the bail-out.

It will be argued that the manner in which the rescue was formulated ensured that virtually none of the fundamental problems exposed by the GFC would be addressed. Indeed, it plausibly can be argued that the bail-out has made the global financial system much more fragile and has exacerbated the other problems with the US economy that brought on the financial collapse. Further, the GFC and policy adopted in its aftermath have (finally) exposed the fundamental weaknesses of the arrangements of the European Monetary Union (EMU). Another GFC is highly likely, and this time it could well begin in the EMU and then spread quickly to the US—the reverse of the transmission we saw in 2007.

Obviously this short contribution can provide only an introduction to each of these issues. Because the explanation of the causes is complex and crucial for understanding why the bail-out actually made things worse, most of the paper will be devoted to that topic.

Causes of the Collapse

The Financial Crisis Inquiry Report makes a strong case that the crisis was foreseeable and avoidable. It did not “just happen” and it had nothing to do with “black swans with fat tails”. It was created by the

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biggest banks under the noses of our “public stewards”. The GFC represents a dramatic failure of corporate governance and risk management, in large part a result of an unwarranted and unwise focus on trading (actually, gambling) and rapid growth (a good indication of fraud, as William Black argues). We could go farther than the Report and note that in all this, the biggest banks were aided and abetted by government “regulators” and “supervisors” who not only refused to do their jobs, but indeed continually pushed for deregulation and desupervision in favor of “self regulation” and “self supervision”. While many want to blame the crisis on “liquidity” problems, the liquidity crisis bore no relation to an “irrational” bank run but instead reflected an accurate appraisal of financial institution insolvency. That in turn can be attributed to catastrophic reductions of lending standards and to pervasive fraud.

I deviate from the Report’s conclusion: financial fragility had grown on trend, making “it” (in the words of Hyman Minsky, referring to a Fisher-type debt deflation process) likely to “happen again”. For that reason, we need to understand the “Minskian” transformation. While the GFC was not strictly inevitable, the financial structure made a crisis highly probable. In many important respects we had produced conditions similar to those that existed on the eve of the “Great Crash”—and we experienced a similar crisis. The most important difference, however, was the response. While we emerged from the Great Depression with a robust financial system, strict regulation, and strong safety nets, as of spring 2012 we have only managed to prop up the financial institutions that caused the crisis—and have left the economy in a much weaker state than it had in either 2006 or 1940.

a. The Minsky Moment

When the GFC struck, many commentators called it the “Minsky Crisis” or “Minsky Moment”, after the economist Hyman Minsky who had developed a famous “financial instability hypothesis” that described the transformation of an economy from a “robust” financial structure to a “fragile” one. A “run of good times” would encourage ever-greater risk-taking, and growing instability would be encouraged if financial crises were resolved by swift government intervention. As Minsky insisted “stability is destabilizing”—and this seemed to perfectly describe the last few decades of US experience, during which financial crises became more frequent and increasingly severe. We could list, for example, the

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2 The Financial Crisis Inquiry Report, final report of the National Commission on the causes of the financial and economic crisis in the United States.
Savings and Loan crisis of the 1980s, the stock market crash of 1987, the Developing Country debt crises (1980s, early 1990s), the Long Term Capital Markets and Enron fiascoes, and the Dot-Com collapse.

Each of these led to US government intervention that prevented a downward spiral of financial markets or of the economy (although in some cases, recessions followed the crises); indeed, after the Dot-Com crisis, the belief that a new Great Moderation had taken hold in the US making serious downturns impossible. All of this encouraged more risk, more financial layering and leveraging (debt issued against debt, with little net worth backing it up). So, it is completely appropriate to give credit to Minsky’s foresight.

b. Minsky’s Stages Approach

But Minsky’s theory had actually gone much farther than this—he had developed a “stages” approach to describe the long-term transformation of the financial system since the late 19th century. It is not necessary to go into this in detail—let us just briefly describe the three main stages. In the early 20th century a form named “finance capitalism” by Rudolf Hilferding took form, dominated by investment banks that provided the finance for corporations. However, by the late 1920s these were mostly financing speculation in financial assets, particularly in equities issued by subsidiary trusts of the investment banks, themselves. In truth, these were little more than pyramid schemes—speculating in essentially worthless shares, much like the infamous schemes of Charles Ponzi or the modern day Bernie Madoff. Goldman Sachs played a prominent role in the scams, and warranted a whole chapter in the best account of the 1929 “Great Crash” by economist John Kenneth Galbraith.

In any event, in Minsky’s view, the Great Depression ended the finance capitalism stage and ushered in a much more stable version with the New Deal reforms of the financial sector plus a much bigger role for the federal government in managing the economy. Minsky called this “managerial-welfare state” capitalism, where the “Big Bank” (Fed) and “Big Government” (Treasury) promoted stable economic

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6 See Wray 2009.


growth, high employment, and rising wages and falling inequality. The US entered its economic “golden age”, which lasted from the end of WWII through the early 1970s.

The problem is that the absence of deep recessions and severe financial crises encouraged innovations that increased financial instability. After 1974, median male earnings stopped growing and began to fall as workers lost effective representation by unions, the social safety net was gutted, and unemployment came to be seen as a desirable outcome—a tool used by policy-makers to keep inflation down. Financial institutions were deregulated and de-supervised, and their power grew in a self-reinforcing manner: as they were able to capture a greater share of profits, their political power increased making it possible to further subvert or eliminate regulations so that they could gain an even larger share of profits.

There are many aspects to this transformation, and Minsky was certainly not the only one to notice it. Some called it “casino capitalism”, many identified it as “financialization”. In important respects, it was similar to Hilferding’s “finance capitalism”—with what were called “nonbank banks”, or “shadow banks” rising to challenge the commercial banks. This development also provided justification for dropping the New Deal reforms so that the banks could “compete” with the new intruders who were poaching business. Even as shadow banks pushed financial practice to new frontiers, the commercial banks insisted that they had to follow suit.

And many if not most of the new practices served no social purpose beyond making top management of financial institutions incredibly rich. At the same time, the structure of incentives and rewards was changed such that risky bets, high leverage ratios, and short-term profits were promoted over long-term firm survival and returns to investors. A good example of the transformation was the conversion of the venerable investment banks like Goldman Sachs from partnerships to publicly held firms with hired and richly rewarded management. While the structure was somewhat different, the results were similar to those that led up to the “Great Crash” in 1929—“pump and dump” incentives were created through which management would “pump” asset and equity prices, and then sell out (“dump”) their own positions before the speculative boom collapsed. What we see by the early 2000s is the coalescence of three different phenomena that made the biggest financial institutions extremely dangerous: 1) the return of “pump and dump” strategies, ripping off customers and shareholders; 2) the move from partnerships to corporate form, which increases the agency problems (institutions run in the interests of

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management, not owners); and 3) excessive executive compensation that was tied to short-term performance, which increases the pressures to “cheat” or to do anything else that justifies huge bonuses.

c. Money Manager Capitalism

Minsky called this new stage “money manager capitalism”. This draws attention to a characteristic feature: huge pools of funds under management by professionals—pension funds, sovereign wealth funds, hedge funds, university endowments, corporate treasuries, and so on. Every money manager had to beat the average return to retain clients, something that is of course statistically impossible. But with such incentives and with virtually no government regulation or oversight, this encouraged not only risky behavior but also ethically compromised actions. In Minsky’s view, the rise of these managed funds was due to the success of the earlier managerial-welfare state capitalism: the absence of depressions and relatively good growth—plus policies that favored private pensions—allowed financial wealth to grow over the entire post-war period. Although financial crises came along and wiped out some wealth, each crisis was contained so that most wealth survived, and quickly resumed growth.

Power shifted away from banks to the very lightly regulated “money managers” at the “shadow banks”. To compete, banks needed to subvert regulations through innovations and then had them legislatively eliminated. This allowed banks to increase leverage ratios, and thus risk, to keep pace with shadow banking practice. There was a “Gresham’s Law” in operation: those institutions that could reduce capital ratios and loss reserves the most quickly were able to increase net earnings and thus rewards to management and investors. Further, there was a shift to maximization of share prices as one of the main goals of management—which supposedly aligned the interests of shareholders and top managers who received stock options in compensation. That in turn encouraged short-term focus on performance in equity markets, which—as we discovered in 1929—is accomplished through market manipulation (both legal and illegal).

The problem was that the volume of financial wealth under management outstripped socially useful investments. To keep returns high, money managers and bankers had to turn to increasingly esoteric

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financial speculation—in areas that not only did not serve the public purpose, but actively subverted it. An example is the rise of index speculation in commodities markets that drives up global prices of energy and food. The Dot-Com bubble is another example—speculators drove up the prices of stocks of internet companies with no business model or prospective profits. The inevitable crash wiped out hundreds of billions of dollars of wealth.

d. Fraud and the US Real Estate Bubble

Another example is the US real estate boom that began before 2000 and finally collapsed in 2007, triggering the GFC.\(^\text{12,13}\) Nothing is more emblematic of the speculative excess than the special collateralized debt obligations created by Goldman Sachs to allow a hedge fund managed by John Paulson to bet against homeowners and the holders of securitized mortgages. The investors would lose, the homeowners would lose their homes, and Paulson would win! Goldman, of course, won too—it got fee income for creating the securities and also for creating the instrument that let Paulson win. And, finally, it was this demand by investment banks and other speculators for risky instruments on which they could place bets that generated the risky “subprime” and “Alt A” mortgages that eventually brought on the GFC.

It would not be too extreme to say that fraud has become normal business practice in the financial sector. Even though the administration of President Obama has refrained from going after top management, the banks have been forced to pay fine after fine and most of the attorney generals of the fifty states are taking action.\(^\text{14}\)

e. Shredding of the New Deal Reforms and Rise of Insecurity

Minsky also linked rising economic insecurity to the money manager phase.\(^\text{15}\) In the 1960s he paradoxically argued against the Kennedy-Johnson War on Poverty because it emphasized welfare and

\(^{12}\) See United States Senate PERMANENT SUBCOMMITTEE ON INVESTIGATIONS Committee on Homeland Security and Governmental Affairs Carl Levin, Chairman Tom Coburn, Ranking Minority Member WALL STREET AND THE FINANCIAL CRISIS: Anatomy of a Financial Collapse MAJORITY AND MINORITY STAFF REPORT PERMANENT SUBCOMMITTEE ON INVESTIGATIONS UNITED STATES SENATE April 13, 2011


\(^{14}\) Unfortunately, they seem to have caved to pressure: [http://www.economonitor.com/lrwray/2012/02/09/state-ag-s-cave-to-banksters-2/](http://www.economonitor.com/lrwray/2012/02/09/state-ag-s-cave-to-banksters-2/) Also see FCIC Report Chapter 22 for a discussion of the foreclosure crisis.

training over job creation. Further, unlike most Keynesian economists, he opposed policy to promote investment and other business-friendly policies that sought to achieve full employment by “pumping” aggregate demand—such as “military Keynesianism” that would stimulate spending in the defense sector. He never believed the “rising tide lifts all boats” story.  

Instead, he wanted targeted spending, New Deal-style government job creation (modeled after the Works Progress Administration that created 8 million jobs), and support for consumption by workers.

He wanted a universal jobs program (he called it “employer of last resort”)—government would guarantee a job offer at the minimum wage for anyone willing to work. He calculated that providing just one minimum wage, full-time job to each poor household would lift two-thirds of families out of poverty. In conclusion, he argued that the War on Poverty without a major job creation component would fail to reduce poverty.

Time would prove him correct—excluding elderly people on Social Security, there was no significant reduction of poverty rates during the War on Poverty years. In any case, inequality began to rise, along with trend increases to the unemployment rate—at least until the boom-and-bust cycle that began with President Clinton. After a decade with some improvement of some social measures (during 1996-2006 unemployment trended somewhat lower, economic growth was a bit better, and poverty stopped rising) the GFC caused massive unemployment, poverty increased, and boosted inequality to record levels.

f. Financial Bubbles, Goldilocks Growth and Government Budgets

The financial sector grew relative to the nonfinancial sectors (manufacturing, agriculture, and nonfinancial services including government spending)—by the time of the GFC the financial sector accounted for 20% of US national value added and 40% of corporate profits. By itself, it was an autonomous source of growth and also of rising inequality due to high compensation in the sector. Up

17 See Kelton and Wray, op. cit.
18 Nersisyan and Wray, op cit
to half of the college graduates from the elite colleges went into the financial sector because rewards there were far higher than in other sectors. Compensation at the very top quite simply exploded.

The federal government’s budget went into significant surplus for the first time since the late 1920s. While most economists thought that was good and praised President Clinton’s projection that the surpluses would continue for at least 15 years, allowing all federal debt to be retired, a few of us at the Levy Economics Institute argued that the surplus would be short-lived. And that it would kill the boom and cause a deep recession. Wynne Godley at the Levy Institute had developed a “three balances” approach to macro analysis based on the accounting identity that the sum of the balances of the domestic private sector, the government sector and the foreign sector must be zero. While any one of these could run a surplus, at least one of the others would have to run a deficit. In the case of the US, by the late 1990s the government sector was running a surplus of about 2.5% of GDP, the foreign balance was 4% of GDP (meaning the US was running a trade deficit so the rest of the world had a surplus), and so by identity the US private sector (firms plus households) had a deficit of 6.5% (the sum of the other two). In other words the private sector was spending $106.50 for every hundred dollars of income. Each year that the private sector spent more than its income, it went more deeply into debt.

We were sure the private sector debt load would become too great, and when spending fell the economy would slip into recession. That in turn would cause job losses and force defaults on some of the debt. We believed that would set-off a severe financial crisis. At the beginning of 2000 that appeared to be happening, but the crisis was not as severe as we expected. The private sector retrenched--spending less than its income--and the Clinton budget surpluses morphed into deficits. The Dot-Com bubble went bust and stock markets tanked. And then something amazing happened: the American consumer started borrowing again—at a pace even greater than during the Clinton boom. So, as it turned out, for a period of 10 years US households spent more than their incomes, with only the brief respite in the recession of 2000. Nothing like this had ever happened before. And it was aided and abetted by the practices of the money managers discussed above, inducing homeowners to go deeply into risky mortgage debt.

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21 Godley and Wray op cit
By 2007 the US ratio of debt to GDP reached an all-time peak of 500%, or, five dollars of debt to service out of each dollar of income.\textsuperscript{22} While much discussion in recent months has been about the government debt ratio, the debt of the household sector as well as nonfinancial business and financial business were all much higher as a percent of GDP. Nonfinancial business debt was actually not a huge problem, as much of this was due to long-term finance of capital equipment—and after 2000 US nonfinancial businesses actually did not borrow much. Household debt was a huge problem, of course, and still weighs heavily on consumers, preventing recovery. But what was particularly unusual, and had long been ignored, was the unprecedented rise of financial sector indebtedness, which reached almost 125% of GDP.\textsuperscript{23}

\begin{itemize}
  \item g. Financialization, Layering, and Liquidity
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There is one final aspect of the rise of money manager capitalism that we need to understand. Above we mentioned that the financial sector’s debt reached 125% of GDP. This is the debt of one financial institution to another. Most of it was very short-term, even overnight. This is the “financialization” and “layering” that many economists now recognize: debt on debt on debt. What financial institutions had done was to shift the source of finance from deposits (household checking accounts and saving accounts) to financing positions in assets by issuing mostly short-term, nondeposit liabilities held by financial institutions. As an example, a bank would purchase mortgage-backed securities by issuing commercial paper; the commercial paper in turn would be bought by a money market mutual fund that issued deposit-like liabilities to firms and households.

Household bank deposits are insured by the government (FDIC insurance), and banks have essentially unrestricted access to the Fed should they need to cover withdrawals. When US mortgage markets tanked and bad reports were coming out about crashing market values of MBSs, households did not need to worry about their insured deposits. But the MMMFs worried about the uninsured commercial paper issued by banks—if the MBS assets were bad, the commercial paper was bad, too. That led to a run out of commercial paper, meaning banks had trouble refinancing their positions—and they could not simply sell the MBSs because there was no market for them.

\textsuperscript{22} Nersisyan and Wray, op cit
\textsuperscript{23} See D’Arista, op cit; and Nersisyan and Wray op cit
Finally, the holders of “deposits” in MMMFs did run out of them, because they were not insured. Suddenly there was a “liquidity crisis”—a run into the most liquid and safe assets (insured deposits plus federal government debt) and a run out of almost everything else. Since financial institutions relied so much on borrowing from each other, and because they no longer trusted each other, the entire global financial system froze. Without government intervention, all financial institutions would have to “sell out position to make position”, as Minsky put it, meaning sell their assets because they could no longer finance them. And that would lead to a debt deflation dynamic, because with no buyers, prices of financial assets would collapse. That is precisely what had happened in the 1930s.

The Bail-Out

As in the case of the causes of the GFC, the details of the response by governments are complex and numerous. I will not go through the fiscal stimulus packages adopted by the US and other nations. Let us turn, however, to the Fed’s response—which, except for the $800 billion fiscal stimulus package allocated to Treasury, was left to clean up the mess.

a. Liquidity or Solvency Crisis?

It has been recognized for well over a century that the central bank must intervene as “lender of last resort” in a crisis. Walter Bagehot explained this as a policy of stopping a run on banks by lending without limit, against good collateral, at a penalty interest rate. This allows banks to cover withdrawals so the run would stop. Once deposit insurance was added to the assurance of emergency lending, runs on demand deposits virtually stopped. However, banks have increasingly financed positions in assets by issuing a combination of uninsured deposits plus very short-term nondeposit liabilities (such as commercial paper). Hence, the GFC actually began as a run on these nondeposit liabilities, which were largely held by other financial institutions. Suspicions about insolvency led to refusal to roll-over short term liabilities, which then forced institutions to sell assets. In truth, it was not simply a liquidity crisis but rather a solvency crisis brought on by all the risky and fraudulent practices.

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26 Wray 2008a op cit
The big banks began to fail. It is important to note that the solvency problems were largely limited to a handful of financial institutions, including the top half dozen banks, the big investment banks, a few big mortgage lenders, and the big money market mutual funds. The vast majority of US banks were not holding the trashiest assets, although some had made what would turn out to be risky home equity loans and commercial loans. In most cases, for all but the biggest financial institutions, it was the GFC and then the deep recession that created problems with their loans.

Proper government response to a failing, insolvent, bank is different than its response to a liquidity crisis. In short, the government is supposed to step in, seize the institution, fire the management, and begin a resolution. Normally, stockholders lose as do the uninsured creditors—which would have included other financial institutions. It is the Treasury (through the FDIC) that is responsible for resolution. In the midst of the crisis, Treasury Secretary Henry Paulson did ask Congress for funds to deal with the crisis and was provided with about $800 billion. However, rather than resolving institutions that were probably insolvent, he tried to buy troubled assets from them; and after realizing that he needed much more funding, he switched recapitalizing them—buying stock in the troubled banks.

b. Deal-Making and Special Purpose Vehicles

With Congress reluctant to provide any more funding, the Fed and Treasury gradually worked-out an alternative approach. In addition to injecting capital into troubled institutions, the Treasury conducted a “stress test” that would supposedly identify institutions likely to fail. However, these tests set thresholds that were far too lax to be of any use. When an institution did face failure, the Treasury and the Fed—usually represented by the New York Federal Reserve Bank—would try to make a “deal” to merge the failing institution into another. Often it would be necessary for the Fed to lend to the failing institution for some period while the deal was negotiated. In addition, the Fed created special facilities to provide

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funding for institutions and also to take troubled assets off their books. By purchasing bad assets, the Fed could turn a failing bank into a solvent bank.

The US Treasury was heavily represented by individuals with experience in investment banking. According to an article by Davidoff and Zaring\(^{30}\), the “bail-out” can be characterized as “deal-making through contracts” as the Treasury and Fed stretched the boundaries of law with behind-closed-doors hard-headed negotiations. It appears that the government did negotiate with a view to keeping its own risk exposure limited; at the same time, it insisted on large “haircuts” to stockholders’ equity but minimal losses to bondholders. It also avoided penalties on bank directors and officers—rarely investigating possible fraud or dereliction of duty. Finally, it avoided “market solutions” in favor of “orderly solutions”. In other words, where markets would shut down an insolvent financial institution the government would instead find a way to keep the institution operating by merger.

Further, government relied on the two institutions that are least constrained by the law: the Fed and the Treasury. Throughout the crisis, the government would stretch and flex its authority muscles but would not boldly violate the law. Davidoff and Zaring argue that the federal government was allowed substantial leeway in its interpretation as state courts were not likely to interfere. Further, the Fed has in the past interpreted its activities as exempt from “sunshine” laws.\(^{31}\) In many ways, this “deal-making” approach that was favored over a resolution by “authority” approach is troubling from the perspectives of transparency and accountability as well for creation of “moral hazard”.

The other aspect was unprecedented assistance through the Fed’s special facilities to provide loans and purchase troubled assets (and to lend to institutions and individuals to purchase troubled assets). In this, the Fed’s actions went far beyond “normal” lending. First, it is probable that the biggest recipients of funds were insolvent. Second, the Fed provided funding for financial institutions that went far beyond the member banks that it is supposed to support. It had to make use of special sections of the Federal Reserve Act, some of which had not been used since the Great Depression. And as in the case of the


\(^{31}\) It literally “took an act of Congress” to get the Fed to release any information concerning its bail-out of banks. Senator Bernie Sanders led a heroic effort (joined by long-time Fed critic Congressman Ron Paul and Congressman Grayson) to shine some light on the Fed’s bail-out activities; and Bloomberg successfully sued for release of data under the Freedom of Information Act, forcing the Fed to “dump” 25,000 pages of data.
deal-making, the Fed appears to have stretched its interpretation of those sections beyond the boundaries of the law.\textsuperscript{32}

We will not go through all of the facilities nor deeply into an examination of the sections invoked to justify the interventions. Instead we will focus on measures of the Fed’s interventions that go beyond “normal” lender of last resort operations. There are two main measures of the total Fed intervention that could qualify as unusual.\textsuperscript{33} The first measure is “peak outstanding” Fed lending summed across each special facility (at a point in time). Several researchers have provided such a calculation—including the GAO, Bloomberg, and the Fed itself—about $1.5 trillion in December 2008, representing the maximum outstanding loans made through the Fed’s special facilities on any day. This gives an idea of the maximum “effort” to save the financial system at a point in time, and also some indication of the Fed’s total exposure to risk of loss. To be sure, the Fed demands collateral against its loans and it is highly improbable that the Fed would lose anything close to that. Indeed, many of the special facilities were successfully wound down with no losses; the only facilities that are likely to incur big losses are those associated with the rescue of AIG.

The second method is to add up Fed lending and asset purchases through these special facilities over time to obtain a cumulative measure of the Fed’s response. To be clear, if the Fed lent $1 billion each day, and that was repaid each evening only to be renewed the next morning with another $1 billion, that would total $30 billion of Fed response over a month. The cumulative measure counts every new loan and every asset purchase made over the course of the life of each special facility. Some of the facilities lasted only a short period, others lasted for two years or more. In some cases, a financial institution borrowed a large amount of funds for a very short period; in other cases, an institution repeatedly borrowed, returning to the Fed many times and remaining in debt for periods up to nearly two years. The cumulative measure would capture such repeated borrowing as continued Fed assistance to the troubled institution. Thus, even if the second institution borrowed less on any given day, the Fed response to help it could sum to a number as large as a short period of assistance through a large loan to an institution that recovered quickly and needed no further help.


Two UMKC graduate students, Andy Felkerson and Nicola Matthews have carefully summed the cumulative lending and asset purchases through the special facilities, obtaining a total Fed response of more than $29 trillion for the period to November 2011.\(^{34}\) To put that in perspective, it is over twice as large as a year’s worth of GDP. The word “unprecedented” does not adequately describe the Fed’s intervention to rescue financial institutions. In the beginning of 2008 the Fed’s balance sheet was $926 billion, of which 80% of its assets were US Treasury bonds; in November 2010 its balance sheet had reached $2.3 trillion, of which almost half of its assets were MBSs. Over the next year it ramped-up its purchases of treasuries (and reduced its use of the special facilities) so that its balance sheet was close to $3 trillion—three times larger than it was on the eve of the crisis.

And still there is no end in sight.

One final comment: many of the Fed’s special facilities used “special purpose vehicles” created to buy assets or to make loans. The creation of SPVs by banks had played a big role in causing the GFC--banks created SPVs to move risky assets off their balance sheets so that they would not need to hold capital, and so that government regulators and supervisors would not see the risk. This allowed banks to take on much more risk and more leverage in an effort to increase profits. In an ironic twist the Fed followed the example set by banks as it created SPVs to subvert constraints written into the Federal Reserve Act.

There is no problem with Fed lending to member banks to stop a run. It is a bit more problematic to lend to insolvent member banks, but still legal. In “unusual and exigent” circumstances, the Fed is free to go much farther under Section 13(3) of the Federal Reserve Act, although as Mehra\(^{35}\) explains, the bar is still high. In such circumstances the Fed can lend to individuals, partnerships and corporations at a discount if they are unable to secure adequate credit from other banks. Further it must lend against indorsed or secured assets. But here’s the problem with the Fed’s invocation of this section to justify its intervention: it created SPVs and then lent to them so that they could buy troubled assets. In other words it financed the purchase of an asset, rather than making a loan. In most cases its loan was to its own SPV, and not to the party that needed assistance. In some cases the loans were not technically “discounts” and were not against endorsed assets (the SPVs owned no assets until they got the loans so they could buy troubled assets); and in most cases the beneficiaries could have obtained loans from other banks, albeit at higher interest rates. In all these respects, the law was “stretched” if not subverted. In all those respects this looks like “bail-out” and not “liquidity provision”.

\(^{34}\) Felkerson, op cit.
\(^{35}\) Mehra op cit
The volume of Fed assistance of questionable legality under 13(3) was very large. Its four SPVs lent approximately $1.75 trillion (almost 12% of the total Fed cumulative intervention). In addition, its questionable loan programs that either lent against ineligible assets or lent to parties that were not troubled total $9.2 trillion (30% of the total intervention). In sum, of the $29 trillion lent and spent by fall 2011, over 40% was perhaps improperly justified under section 13(3).36

c. Incentives

With the “deal-making” and “bail-out”, it is unlikely that financial institutions have learned anything from the crisis—except that risky behavior will lead to a bail-out. In the Saving and Loan crisis of the 1980s, many institutions were shut down and resolved, and more than a thousand officers in top management served jail time. In the current crisis, no top officer has been prosecuted, much less jailed. Banks have been slapped on the wrists with some fines—usually without being forced to admit wrongdoing.

With all the government support most of the financial institutions have so far survived the crisis. While they are reluctant to quickly resume the practices that caused the crisis—subprime lending, securitization of junk assets—they did not suffer much from them. It is probable that if the economy and financial sector were to recover, risky practices would come back.37 Further, and more alarmingly, the financial sector bounced right back to taking 40% of corporate profits, to pay-outs of huge bonuses to top management and traders, and to accounting for 20% of value-added toward national GDP.

No significant financial reforms made it through Congress. All of this is in sharp contrast to the 1930s New Deal reform. Half of all banks failed that time around, and most of the survivors were taken-over by the government. Management was replaced. The Pecora Commission was given relative free-reign to investigate the causes of the crisis and to go after the crooks. Widespread defaults and bankruptcies wiped out a lot of the private sector’s debt. The financial sector was down-sized and rendered unimportant for several decades.

World War II led to budget deficits equal to 25% of GDP, and government debt grew much faster than income so that it flooded private portfolios with safe and liquid assets. The New Deal provided jobs and then a safety net for those who fell through the cracks of the “Golden Era” of US economic growth. The

36 Author’s calculations based on Mehra, op cit, and Felkerson op cit.
37 There are already some reports that subprime MBSs are making a comeback.
www.huffingtonpost.com/2012/02/16/subprime-mortgage-_n_1282157.html.
“managerial, welfare-state” version of capitalism emerged to replace finance capitalism. This time, after the GFC, we still have the modern version of finance capitalism—money manager capitalism—somewhat worse for the wear, but still pumping up commodities market bubbles and the stock market.

**Conclusions and Prospects**

In his *General Theory*, J.M. Keynes argued that substandard growth, financial instability, and unemployment are caused by the fetish for liquidity. The desire for a liquid position is anti-social because there is no such thing as liquidity in the aggregate. The stock market makes ownership liquid for the individual “investor” but since all the equities must be held by someone, my ability to sell-out depends on your willingness to buy-in.

Over the past several decades, the financial sector moved into short-term finance of positions in assets. This is related to the transformation of investment banking partnerships that had a long-term interest in the well-being of their clients to publicly-held, pump-and-dump enterprises whose only interest is the well-being of top management. It also is related to the rise of shadow banks that offer deposit-like liabilities but without the protection of FDIC. It is related to the Greenspan “put” and the Bernanke “great moderation” that appeared to guarantee that all financial practices—no matter how crazily risky—would be backstopped by Uncle Sam. And it is related to very low overnight interest rate targets by the Fed (through to 2004) that made short-term finance cheap relative to longer-term finance.

All of this encouraged financial institutions to rely on short short-term finance. Typically, financial institutions were financing positions in assets by issuing IOUs with a maturity of mere hours. But the assets were increasingly esoteric positions in mark-to-myth structured assets with indeterminate market values—indeed, often with no real markets into which they could be sold. Further, many of these assets had no clearly defined income flows—virtually by definition, a NINJA loan (no income, no job, no assets) has no plausible source of income to service the debt. That is just the most outlandish example—but much of the “asset backed commercial paper” (ABCP) had no reliable source of income to service liabilities issued. US debt-to-GDP ratios reached 500%—there was a dollar of income to service $5 of debt. Inevitably, the short-term liabilities of financial institutions could not be serviced—and they could be rolled over only so long as the myths were maintained.

As soon as holders of these risky assets wondered whether they would be repaid, the whole house of cards collapsed. And that largely took the form of one financial institution refusing to “roll over” another
financial institution’s short term IOUs. Four years and trillions of lost dollars of wealth later, we are still in crisis.\textsuperscript{38}

The Fed’s bail-outs of Wall Street stretched and might have violated the law as established in the Federal Reserve Act (and its amendments) and also well-established procedure. There is a long tradition in the Fed of a distinction between continuous versus emergency borrowing. Briefly, the Fed is permitted to lend (freely as Bagehot recommended) to resolve a liquidity crisis, but it has long refused to provide “continuous” lending. The Fed should stop a liquidity crisis but then solvent financial institutions should quickly return to market funding of positions in assets. The crisis started in 2008. Four years later the Fed is still lending at “subsidized” (below market) interest rates.

The Fed is also generally prohibited from lending to “nonbank” financial institutions—shadow banks that are not members of the Federal Reserve System and that do not issue FDIC insured deposits. However, the exception in the “13(3)” provisions allows the Fed to lend in “unusual and exigent” conditions. The 2008 crisis qualifies as unusual and exigent. However, the 13(3) restrictions are tight and the Fed seems to have stretched the law. Some might object that while there was some questionable, possibly illegal activity by our nation’s central bank, wasn’t it justified by the circumstances?

The problem is that this “bail-out” validated questionable, risky, and in some cases illegal activities of top management on Wall Street, those running the “control frauds” in the terminology of Bill Black.\textsuperscript{39} Most researchers agree the bail-out continued if not increased the distribution of income and wealth flowing to the top one-tenth of one percent. It kept the same management in control of serial abusers—Goldman, Bank of America, Citigroup, and JPMorgan-Chase—as they paid record bonuses to top management. Some of their fraudulent activity has been exposed, and the top banks have paid numerous fines. Yet, Washington has been paralyzed—Eric Holder, US Attorney General, has not begun a single investigation of criminal behavior by top management.\textsuperscript{40}

What should have been done? Bagehot’s sound recommendations must be amended. Any of the “too big to fail” financial institutions that needed funding should have been required to submit to Fed oversight. Top management should have been required to submit resignations as a condition of lending

\textsuperscript{38}See Chapter 21 of the FCIC Report for discussion of the economic fallout.

\textsuperscript{39}Black, William. 2005. The Best Way to Rob a Bank is to Own One; How Corporate Executives and Politicians Looted the S&L Industry, University of Texas Press.

\textsuperscript{40}Indeed, he worked with 49 of the State Attorneys General to “resolve” the foreclosure fraud crisis in a manner that avoided criminal investigation. See http://www.economonitor.com/lrwr/2012/02/09/state-ags-cave-to-banksters-2/
(with the Fed or Treasury holding the letters until they could decide which should be accepted). The Attorney General’s office should have been called in to investigate all top management, to prosecute crimes, and to pursue jail time for convictions. Short-term lending against the best collateral should have been provided, at penalty rates. A “cease and desist” order should have been enforced to stop all trading, all lending, all asset sales, and all bonus payments. The FDIC should have been called-in (in the case of institutions with insured deposits), but in any case the institutions should have been dissolved according to existing law: at least cost to Treasury and to avoid increasing concentration in the financial sector.

This would have left the financial system healthier and smaller; it would have avoided the moral hazard problem that has grown over the past three decades as each risky innovation was validated by a government-engineered rescue; and it would have reduced the influence that a handful of huge banks have over policy-makers in Washington.