

Wray, L. Randall

**Research Report**

## Waiting for the next crash: The Minskyan lessons we failed to learn

Public Policy Brief, No. 120

**Provided in Cooperation with:**

Levy Economics Institute of Bard College

*Suggested Citation:* Wray, L. Randall (2011) : Waiting for the next crash: The Minskyan lessons we failed to learn, Public Policy Brief, No. 120, ISBN 978-1-936192-18-2, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

This Version is available at:

<https://hdl.handle.net/10419/54272>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



Levy Economics Institute of Bard College

---

# ***Public Policy Brief***

---

No. 120, 2011

## **WAITING FOR THE NEXT CRASH: THE MINSKYAN LESSONS WE FAILED TO LEARN**

L. RANDALL WRAY

# Contents

---

## **3 Preface**

Dimitri B. Papadimitriou

## **4 Waiting for the Next Crash**

L. Randall Wray

## **10 About the Author**

---

The Levy Economics Institute of Bard College, founded in 1986, is an autonomous research organization. It is nonpartisan, open to the examination of diverse points of view, and dedicated to public service.

The Institute is publishing this research with the conviction that it is a constructive and positive contribution to discussions and debates on relevant policy issues. Neither the Institute's Board of Governors nor its advisers necessarily endorse any proposal made by the authors.

The Institute believes in the potential for the study of economics to improve the human condition. Through scholarship and research it generates viable, effective public policy responses to important economic problems that profoundly affect the quality of life in the United States and abroad.

The present research agenda includes such issues as financial instability, poverty, employment, gender, problems associated with the distribution of income and wealth, and international trade and competitiveness. In all its endeavors, the Institute places heavy emphasis on the values of personal freedom and justice.

Editor: Michael Stephens  
Text Editor: Barbara Ross

The Public Policy Brief Series is a publication of the Levy Economics Institute of Bard College, Blithewood, PO Box 5000, Annandale-on-Hudson, NY 12504-5000.

For information about the Levy Institute, call 845-758-7700 or 202-887-8464 (in Washington, D.C.), e-mail [info@levy.org](mailto:info@levy.org), or visit [www.levyinstitute.org](http://www.levyinstitute.org).

The Public Policy Brief Series is produced by the Bard Publications Office.

Copyright © 2011 by the Levy Economics Institute. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information-retrieval system, without permission in writing from the publisher.

ISSN 1063-5297  
ISBN 978-1-936192-18-2

## Preface

---

In this new brief, Senior Scholar L. Randall Wray lays out the numerous and critical ways in which we have failed to learn from the latest global financial crisis (GFC), and identifies the underlying trends and structural vulnerabilities that make it likely a new crisis is right around the corner. Borrowing from the work of Hyman P. Minsky, Wray investigates the instabilities in the financial system that rendered it susceptible to a shock like the subprime crisis, arguing that, as in 1929, the system was so unstable that the “trigger” really could have been anything. He also suggests some policy changes that would shore up the financial system while reinvigorating the real economy.

If we are looking for answers, Wray argues, we ultimately need to look beyond the surface, beyond subprime mortgages, to Minsky’s account of the long-run transformation of the economy toward instability. A key part of this transformation involves the “financialization” of the economy, in which the financial sector captures a larger and larger share of GDP and financial layering proliferates. Leverage increases as financial institutions borrow from one another in order to lend, creating more and more complex linkages between firms—linkages and layers that render the whole system vulnerable.

Alongside the hypertrophy of the financial sector, Wray traces the stagnation in the real economy, pointing to the recent decoupling of economic growth from employment and wage gains. He draws out the connections between stalled wage growth and the GFC. Households could not count on rising incomes to finance increased consumption, so they eventually turned to indebtedness, particularly through home equity loans, to help prop up living standards and keep up with the Joneses. The combination of debt-fueled consumption and a fraud-riddled real estate boom was crucial to the economy’s ultimate collapse.

Wray explains that it is a mistake to attribute the global financial crisis to the Federal Reserve decision to keep interest rates too low. It is also a misconception to regard the GFC as merely a liquidity crisis. Instead, it was a matter of mass insolvency among major financial institutions, a problem that may still be lurking.

Among the lessons we ought to have learned from the GFC is that we cannot rely upon markets alone to ensure solid underwriting. In the face of a euphoric boom, underwriting standards deteriorated or were eliminated entirely, and although it may seem like stricter lending standards have returned, says Wray, this is just a temporary reaction to the crisis. Unless we take steps to create the proper incentives, we can expect standards to deteriorate at the next sign of ebullience. The reality is that the GFC dealt yet another blow to the “efficient markets hypothesis,” as markets failed to discover the proper prices of securitized loans. Finally, Wray argues that we cannot understand the GFC without appreciating the deep-seated and widespread role of fraud, up and down the financial food chain of securitized mortgage lending.

Moving forward, Wray recommends that we restructure our financial institutions with an eye toward placing limits around both size and function. Economies of scale are reached at a fairly small size in banking, and, among other problems, oversize banks create opportunities for control fraud. Financial institutions must be forced to choose whether they will hold a bank charter or participate in speculative trading. Banks holding a charter ought to be regarded as public utilities and prohibited from securitizing. For investment banks, incentives for better underwriting can be created by reforming compensation practices. Finally, Minsky’s employer-of-last-resort (ELR) policy, offering a guaranteed job to all those who are willing and able to work, would help revitalize the real economy. By encouraging full employment at all stages of the business cycle, an ELR program would help reduce inequality and fuel consumption on the basis of growing incomes, rather than debt. These measures would go a long way in moving the economy toward stability and rising living standards, and away from financialization and fragility.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*  
October 2011

## Introduction

As the media cycle churns along, public discussion of the roots of the financial crisis has faded into the background. Likewise, the political moment for restructuring the financial system and its institutions has passed. The already tame measures of Dodd-Frank are being further enfeebled as an empowered congressional minority threatens to withhold funds from new regulatory agencies; major players in the financial world continue to avoid prosecution for their fraud-stained roles in the crisis; and Wall Street bounces back to claim its 40 percent share of all corporate profits. Business as usual has returned to the financial sector.

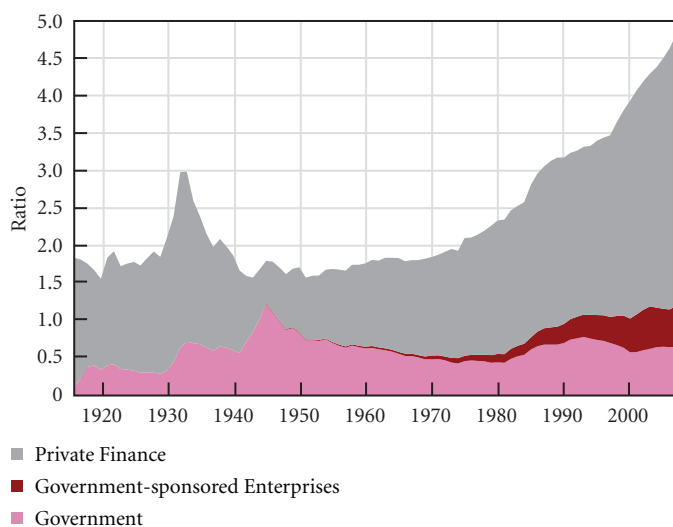
The real-world economic devastation wrought by the crisis, however, lingers on—as does the underlying brittleness of the financial system. We have not learned the lessons we ought to have learned from the global financial crisis (GFC), and have thus squandered our chance to engage in the real restructuring of the financial system that is necessary to prevent another crash. Although the prospects of further reform are now dead, we can at the very least prepare ourselves for the next crisis—and for the next opportunity to revive the financial structure debate—by learning the right lessons from the last crisis.

Doing so, however, requires figuring out what went wrong in the first place. The work of Hyman P. Minsky allows us to look beyond the details of the subprime mortgage crisis to the underlying conditions that have made the economy susceptible to the “shock of the moment.” His work also suggests a possible blueprint, should the political opportunity ever present itself, for restructuring the financial system and rebalancing the economy—in a move away from speculation and fraud and toward real improvements in living standards.

## What Went Wrong

The high rate of defaults in subprime mortgages was the trigger for this latest crisis, but for anyone interested in preventing the next one, the problems run much deeper than the subprime mess. In fact, the financial system was already so fragile that, with respect to the triggering event, it could have been anything. At less than \$2 trillion, the total subprime universe was modest relative to US GDP; the number of defaults was not, on its own, sufficient to explain a crash of the magnitude that occurred. What allowed this event to activate a global financial panic and a resulting debt deflation was a long-term transformation of the economy toward instability, a shift traced by Minsky since the

**Figure 1 Total Financial Liabilities Relative to GDP, 1916–2008**



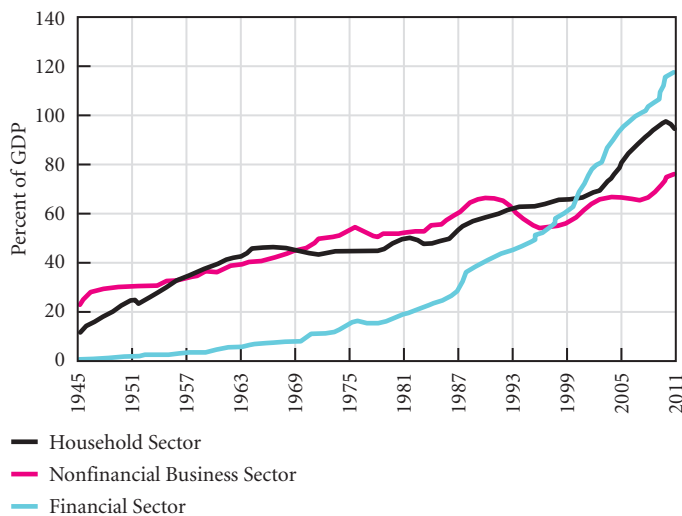
Sources: Carter et al. 2006; National Income and Product Accounts (NIPA); Federal Reserve Flow of Funds Accounts (1945–)

1950s. It is only by addressing this underlying structural instability that we can prevent “It”—a financial crisis in conjunction with an economic downturn—from happening again. In the absence of such fundamental reform, we should expect the next crisis to be right around the corner, and for it to be worse than the last one.

The story of the GFC cannot be told without several chapters devoted to the “financialization” of the economy—to the rising share of GDP flowing to the financial sector. Total US debt (of all types) rose from just above 150 percent of GDP at the end of World War II to almost five times GDP in 2008; the previous peak, in 1929, was three times GDP (Figure 1). Financialization is marked by increased leverage, with debt piled on top of debt, and more and more complex linkages between financial institutions—essentially, an explosion of financial layering in which financial institutions borrow from one another to lend. These linkages create the conditions under which the failure of an institution like Bear Stearns or Lehman Brothers can result in the sort of toppling of dominoes that occurred in the financial sector. A look at the ratio of financial institution liabilities to GDP, a decent measure of financialization, reveals a telling acceleration in the last couple of decades (Figure 2).

Minsky’s earliest work from the 1950s focused on the expanding role of financial institutions, and he noticed an

**Figure 2 Credit Market Debt Outstanding, 1945–2011**  
(in percent of GDP)



Source: NIPA; Federal Reserve Flow of Funds Accounts

increase in debt layering as early as the mid-1960s—a development, he warned, that could ultimately make “It” happen again. Minsky’s financial instability hypothesis came to be focused on the long-term transformation of the economy toward a stage he called “money manager capitalism” (Minsky 1986, 1992a, 1992b, 1992c, 1992d; Minsky and Whalen 1996; Wray 2008, 2009). Money manager capitalism is marked by the potential for deep instability, with massive pools of funds, directed by professionals seeking the highest possible returns, generating successive speculative bubbles in stocks, real estate, and commodities. Examples include pension funds, sovereign wealth funds, mutual funds, and insurance funds. Pension funds alone reached about three-quarters the size of GDP. These huge pools of managed money, including those overseen by highly leveraged “shadow banks,” were (1) for the most part unregulated and (2) able to compete with regulated banks. Deregulation in the banking sector was in part a reaction to this competition from shadow banks. The creation of highly leveraged and largely unregulated special purpose vehicles, for instance, can be attributed to an attempt by banks to keep up with the shadow banking sector, which did not labor under minimum capital and reserve requirements. The creation of these off-balance-sheet entities ended up being crucial to the recent collapse, as these entities took huge risks without supervision; those risks came back to banks when the crisis

hit. It is difficult to imagine how we could have had the recent GFC without the rise of money managers and shadow banks.

Alongside the move toward greater financialization and development of the money manager stage of capitalism were the effects of stagnating real wages and rising inequality. Real median wage growth has been nearly flat since the early 1970s, as productivity gains flowed largely to the top of the income distribution. This stagnation led to increasing household indebtedness as the average family struggled to maintain its living standards (Wray 2005). For a while, increasing the number of workers per family (mostly women with children) helped to support consumption, but as lending standards relaxed and housing prices boomed, consumption was fueled by home equity loans. In fact, roughly half of subprime and “Alt-A” (a step below prime) loans were for second mortgages or cash-out re-fi’s used to finance consumption, not ownership.

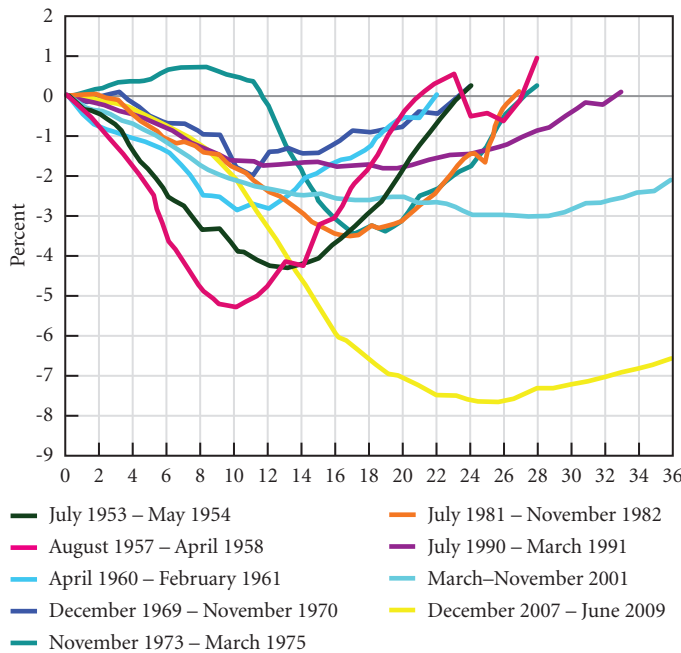
In other words, as finance metastasized, the “real” economy was withering—with the latter phenomenon feeding into the former. High inequality and stagnant wage growth tends to promote “living beyond one’s means,” as consumers try to keep up with the lifestyles of the rich and famous. Combine this with lax regulation and supervision of banking, and you have a debt-fueled consumption boom. Add a fraud-fueled real estate boom, and you have the fragile financial environment that made the GFC possible.

### The Lessons We Should Have Learned

Minsky’s view is that the transformation of the economy and its financial structure from robust to fragile is due, not to external market factors like government intervention and regulation, but to the “normal” operations and incentives of financial capitalism. This potential for negative transformation is ever present. Minsky argued that the very “success” of this economy—its upward euphoric booms—accounts for its truly dangerous instability because it makes a 1929-style crash possible.

Similarly, the market alone cannot be relied upon to provide stable employment growth and broadly shared income gains. There are no automatic forces, in the Minsky-Keynes view, pushing the economy toward full employment. Although the GFC has occasioned a dramatic employment crisis, we should not ignore the longer-term trends. The jobless recovery is an extreme example of a trend that has been observed for the last few decades: the seeming decoupling of economic growth from employment. Growth on its own is no longer a guarantee of full

**Figure 3 Change in Employment 36 Months after Beginning of Recession, Relative to Prerecession Level (in percent)**



Source: Bureau of Labor Statistics

Note: Some lines reach zero; that is, employment reverts to its prerecession level in less than 36 months.

employment. Earlier postwar recessions were marked by robust recoveries in terms of job creation. In the last couple of decades, however, the recuperation of jobs in the aftermath of a recession has lagged (Figure 3). After the 1990–91 recession, for example, it took almost 32 months for employment to return to its prerecession level; after the 2001 recession, 36 months. The current recession features an even more dramatic lag: 36 months after it began, employment still remains 7 percent short of its prerecession level.

The solutions to these problems, in both finance and the real economy, lie beyond markets. Rebalancing the economy requires a restructuring and reregulation of the financial system, along with government policies to promote and guarantee full employment. Before we turn to these solutions, however, we need to dwell on a few of the more particular lessons we ought to have learned from the previous GFC.

First, while some analysts blame the Federal Reserve for keeping the interest rate too low and thus promoting speculation, this view is mostly wrong. As John Kenneth Galbraith (1961) pointed out in his analysis of the Great Crash, low inter-

est rates do not necessarily fuel speculation. In any case, the Fed had already begun raising interest rates in 2004, and most of the worst real estate market abuses occurred later. Raising interest rates in a bubble will not have much impact, since the prospective earnings swamp any 400-basis-points increase—a rather large rate hike that would take a couple of years to phase in (since the Fed moved to a policy of “gradualism,” or a series of small hikes, when it adopted the New Monetary Consensus in the mid-1990s).

Second, this was not a liquidity crisis, but rather a massive insolvency across the largest banks, shadow and otherwise. The banks had an insufficient supply of good assets to offer as collateral against loans—just trashy real estate derivatives plus loans to one another, all backed by nothing other than a fog of deceit. All it took was for one gambling banker to call the bluff. As default rates rose, banks realized not only that they held shoddy mortgage products but that other banks and financial institutions did as well. Consequently, they refused to roll over short-term liabilities and stopped lending to one another, and the whole financial layering–supported scheme collapsed. This was not a matter of some “global missed payment.” In fact, the major banks are probably *still* insolvent, propped up only by the backing provided by the US Treasury and the Fed.

Third, the “efficient markets hypothesis,” which tells us (among other things) that markets will discover the proper prices of securitized loans, failed. There is, in other words, no substitute for good underwriting; for a solid process of determining creditworthiness and creating incentives for predictable repayment. Over the last decade, the largest institutions involved in home finance reduced their underwriting standards, or they eliminated them entirely—hence the absurd “Ninja loans” (no income, no job, no assets). Underwriting standards, when they depend upon “market discipline” alone, should be expected to deteriorate, as they did in this latest crisis and those before it. When some asset class is booming, lenders come to expect that the prices of those assets will continue to rise. They will then lend more relative to value, current income, and expected cash flow because asset price appreciation makes most loans good. If things do not work out, loans can be refinanced or the collateral seized and sold. It goes on until someone questions the boom—and starts to sell assets or refuses to roll over debt. The discovery that assets are probably overvalued causes prices to reverse course and then to collapse, so borrowers sink underwater and lenders are left insolvent. A run on uninsured liabilities then begins.

In the GFC, “depositors” in money market mutual funds began to worry about “breaking the buck” (i.e., the funds would not be able to guarantee that a dollar of their liabilities would be worth a dollar), causing a run. Similarly, shadow banks that relied on “rolling over” very short-term liabilities (including commercial paper) encountered rising “haircuts” (the discount applied to their collateral) and could not refinance their asset positions. That led to “fire sales” of assets, declining asset prices, and a general liquidity crisis. More important, it was recognized that assets had been tremendously overvalued, so that, even with Treasury extensions of guarantees (to money market mutual funds, for example) and trillions of dollars in lender-of-last-resort activity by the Fed, no one wanted to refinance banks and shadow banks. Financial institutions, which relied on one another (rather than on depositors) for funding, discovered the dangers of “interconnectedness.” They began to delever, selling their toxic assets to the Fed (in the first round of quantitative easing) and unwinding their positions.

The current tightening of loan standards is not evidence that banks have learned their lesson but simply a natural reaction to the crisis. Absent any serious regulatory measures ensuring otherwise, underwriting standards will gradually (and predictably) wither away and disappear as the next euphoric boom emerges. “Market discipline,” such as it is, perversely leads to insufficient underwriting and, in turn, inadequate lending, when underwriting and liquidity are needed most (underwriting at the height of euphoria, and liquidity in the wreckage of a bust).

Finally, policymakers must recognize that the activities leading up to and through the crisis were riddled with fraud. Fraud, at multiple levels, became normal business practice—from lender fraud and foreclosure fraud to the practice of duping investors into buying toxic securities with bait-and-switch tactics, while simultaneously betting against those securities using credit default swaps. Every layer in the home finance food chain was not only complex but also fraudulent, from the real estate agents to the appraisers and mortgage brokers who overpriced properties and induced borrowers into terms they could not afford, to the investment banks and their subsidiary trusts that securitized the mortgages, to the credit rating agencies and accounting firms that validated values and practices, to the servicers and judges who allowed banks to steal homes, and on to the CEOs and lawyers who signed off on the fraud. Once a bank has made a “liar’s loan,” every other link in the chain must be tainted. And that means every transaction, every certification,

every rating, and every signature all the way up to that of the investment bank CEO is part of the cover-up.

During the thrift fiasco in the late ’80s and early ’90s, the fraudsters were finally shut down, more than a thousand were jailed, and the Bush (Senior) administration resolved the crisis with an infusion of about \$200 billion, using the newly created Resolution Trust Corporation. While this “bailout” was imperfect, at least it stopped the fraud, closed the worst thrifts, and jailed many of the crooks. So far, in this much bigger crisis, we have done none of those things.

### **Preparing for the Next Crisis**

Should the next crisis create the necessary sense of urgency, the following reforms in both finance and the “real” economy should be considered. The long-run US trend has been to consolidate a wide range of services within the affiliates of a bank holding company. The New Deal reforms separated institutions by function (and state laws against branching provided geographic constraints). Natural evolution plus deregulation allowed the growth of a handful of dominant behemoths that now play a key role in providing all of these services. Generally speaking, since economies of scale exhaust themselves fairly quickly in banking, as Minsky and others have argued, there ought to be a presumption in favor of limiting the size of banks. Larger institutions are much harder to regulate and supervise, creating incentives for the development of control fraud, in which owners are duped while managers are enriched. The supposed benefits and “synergies” that were to flow from bank consolidation and extension of scope have mostly been opportunities for institutions to bet against their own customers. Charles Keating’s Lincoln Savings and Loan used its FDIC seal of approval to sell risky and ultimately worthless assets to elderly widows who thought they were buying insured certificates of deposit. More recently, Goldman Sachs allowed hedge fund manager John Paulson to design sure-to-fail synthetic collateralized debt obligations that Goldman sold to its own customers, allowing both Goldman and Paulson to bet on failure using credit default swaps (Eisinger and Bernstein 2010).

Financial institutions should be offered a stark choice between either holding a bank charter or engaging in speculative trading. In this scenario, investment banks would not be allowed to “play with house money” (FDIC-insured deposits) and chartered banks would be prohibited from securitizing.



Chartered banks ought to be conceived of as public utilities, serving public purposes, and as such, they should not be engaged in the kind of securitized lending that undermines solid underwriting if they are going to have access to government guarantees and Fed lending. In this vein, banks ought to be required to hold loans to maturity. There is no legitimate reason for banks to move assets off their balance sheets. There is also no need to make securitization itself illegal, but banks should not be allowed to engage in it.

Banks should ultimately have a narrow focus and a limited set of operations. For instance, business functions not related to commercial and residential real estate mortgages and the making of short-term commercial loans should be excised from a bank's operations. Other financial institutions may engage in activities beyond this narrow scope, but if they do so, they should not be provided with government backstops or guarantees.

For those institutions that will engage in trading, including investment banks, we must change their incentive structure in order to promote better underwriting. It will be very difficult to reorient investment banking toward a long-term horizon with proper underwriting when debt is securitized and subject to lax oversight, the average stock is held less than a year, and the stock market as a whole is a negative source of capital asset funding (since firms are caught up in the casino, purchasing their own equity to share in the gains of a speculative bubble). Still, it is necessary to do so. Compensation for managers and traders at investment banks should be linked to long-term results. For instance, compensation could be tied to five-year income flows, with "clawbacks" in the case of losses. Investment banks should ultimately be reoriented toward playing more of an intermediary role, holding long-term debt and issuing their own debt to savers. Attempts to impose higher capital ratios, such as those mandated in Basel III, do not provide the necessary discipline—investment banks that "originate to distribute" do not hold the relevant assets on their books anyway.

Along with these financial sector reforms, we must also address the cyclical and long-term unemployment problem. Minsky developed an "employer of last resort" (ELR) policy, in which government would provide a job guarantee to all who were willing and able to work (Minsky 1965, 1986; Wray 1998; Kelton and Wray 2004). An ELR program would offer a job at the minimum wage, plus benefits, with no time limits and no income, gender, education, or experience requirements. Funding would be provided by the federal government and administration

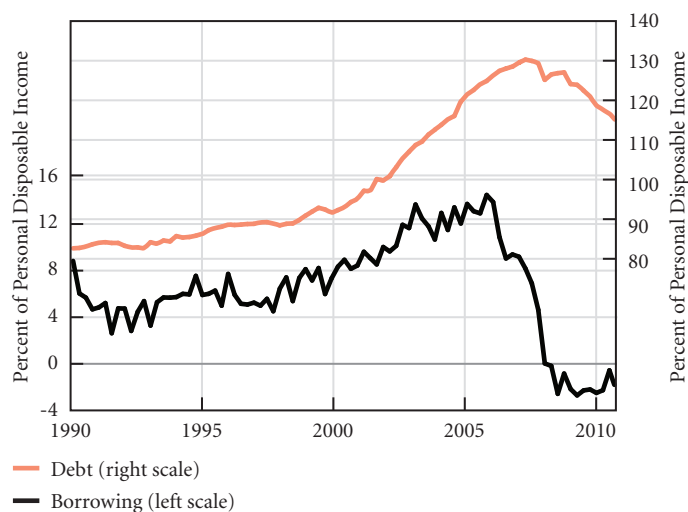
would be decentralized, with state and local governments, as well as nonprofits, proposing projects. Proposals would be evaluated on the following criteria: (1) value to the community, (2) value to the participants, (3) likelihood of successful implementation of the project, and (4) contribution to preparing workers for nonprogram employment.

Rather than a one-shot solution to a cyclical downturn, an ELR program of this kind is designed to be a permanent feature supporting the labor market. In an expansion, employers would recruit and hire workers from the program "pool"; in a downturn, the jobs guarantee would ensure a secure flow of income for those who were laid off. It would also provide training and experience for those who could not otherwise find a job. By encouraging full employment, an ELR policy would help reduce inequality and promote income-supported (rather than private debt-fueled) consumption.

### Conclusion

The conditions that held in 2007 have been replicated, and the next GFC is just waiting for a trigger. The bailout has increased the linkages among the top four or five banks, making the system even more fragile. We've lost eight million jobs, opening a demand gap of about \$1 trillion. Although some households have defaulted on their debts, and others have repaid portions of theirs, most of the household debt held in 2007 still exists (Figure 4).

**Figure 4 Household Borrowing and Debt, 1990–2011**



Sources: Federal Reserve; Bureau of Economic Analysis

Against this background, there are multiple events that could trigger a new, potentially deeper crisis. Should information leak out that one of the major US banks is insolvent (a proposition believed by many analysts), another massive liquidity crisis would be likely. Alternatively, the problems could start in Europe and ripple into the United States: for example, there is a plausible path that can be traced from US money market mutual fund holdings of eurobank assets (i.e., \$3 trillion of extremely short-term liabilities that are like deposits but not insured) to a new global financial shock. Last time, the US government extended its guarantee to all of them; Dodd-Frank now outlaws such intervention. So the appearance of a problem among eurobanks could bring down that whole market—which is about twice the size of the US subprime mortgage market that brought on the global financial crisis last time.

Far-reaching reform along the Minskyan lines traced above will likely be conceivable only in the aftermath of the next crisis. Unfortunately, that opportunity may be right around the corner.

## References

- Carter, S. B., et al., eds. 2006. *The Historical Statistics of the United States: Earliest Times to the Present*. Millennial Edition. New York: Cambridge University Press.
- Eisinger, J., and J. Bernstein. 2010. “The Magnetar Trade: How One Hedge Fund Helped Keep the Bubble Going.” *ProPublica*, April 9.
- Galbraith, J. K. 1961. *The Great Crash, 1929*. 2nd ed. Boston: Houghton Mifflin.
- Kelton, S., and L. R. Wray. 2004. “The War on Poverty after 40 Years: A Minskyan Assessment.” Public Policy Brief No. 78. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College. June.
- Minsky, H. P. 1965. “The Role of Employment Policy.” In Margaret S. Gordon, ed. *Poverty in America: Proceedings of a National Conference Held at the University of California, Berkeley, February 26–28, 1965*. San Francisco: Chandler Publishing Company.
- . 1986. *Stabilizing an Unstable Economy*. New Haven, Conn.: Yale University Press.
- . 1992a. “Reconstituting the United States’ Financial Structure: Some Fundamental Issues.” Working Paper No. 69. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College. January.
- . 1992b. “The Capital Development of the Economy and the Structure of Financial Institutions.” Working Paper No. 72. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College. January.
- . 1992c. “The Economic Problem at the End of the Second Millennium: Creating Capitalism, Reforming Capitalism and Making Capitalism Work.” Unpublished manuscript (prospective chapter), May 13. Minsky Archive. Levy Economics Institute of Bard College, Annandale-on-Hudson, N.Y. (hereafter, Minsky Archive).
- . 1992d. “Reconstituting the Financial Structure: The United States.” Unpublished manuscript (prospective chapter, in four parts), May 13. Minsky Archive.
- Minsky, H. P., and C. Whalen. 1996. “Economic Insecurity and the Institutional Prerequisites for Successful Capitalism.” Working Paper No. 165. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College. May.
- Wray, L. R. 1998. *Understanding Modern Money: The Key to Full Employment and Price Stability*. Northampton, Mass.: Edward Elgar Publishing.
- . 2005. “The Ownership Society: Social Security Is Only the Beginning.” Public Policy Brief No. 82. Annandale-on-Hudson, N.Y.: Levy Economics Institute of Bard College. August.
- . 2008. “Lessons from the Subprime Meltdown.” *Challenge* 51, no. 2 (March): 40–68.
- . 2009. “The Rise and Fall of Money Manager Capitalism: A Minskian Approach.” Special Issue, *Cambridge Journal of Economics* 33, no. 4 (July): 807–28.

## About the Author

---

Senior Scholar L. RANDALL WRAY is a professor of economics at the University of Missouri–Kansas City and director of research at the Center for Full Employment and Price Stability. He works in the areas of monetary policy, employment, and social security. Wray has published widely in academic journals and is the author of *Money and Credit in Capitalist Economies: The Endogenous Money Approach* (Edward Elgar, 1990) and *Understanding Modern Money: The Key to Full Employment and Price Stability* (Edward Elgar, 1998). He is also the editor of *Credit and State Theories of Money: The Contributions of A. Mitchell Innes* (Edward Elgar, 2004) and coeditor (with M. Forstater) of *Keynes for the 21st Century: The Continuing Relevance of The General Theory* (Palgrave Macmillan, 2008).

Wray holds a BA from the University of the Pacific and an MA and a Ph.D. from Washington University in St. Louis.