



*Conference Proceedings*

17<sup>th</sup>  
ANNUAL  
HYMAN P. MINSKY CONFERENCE  
ON THE STATE OF THE U.S. AND  
WORLD ECONOMIES

*Credit, Markets, and the Real Economy:  
Is the Financial System Working?*

*April 17–18, 2008, Blithewood, Annandale-on-Hudson, New York  
A conference of The Levy Economics Institute of Bard College*

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*The proceedings consist of submitted papers by the speakers and transcripts of the speakers' remarks, and summaries of session participants' presentations.*

## Foreword

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I am delighted to welcome you to the 17th Annual Hyman P. Minsky Conference on “Credit, Markets, and the Real Economy: Is the Financial System Working?”

With consumer confidence plummeting, unemployment rising, and house foreclosures at record levels, it is clear that the falling U.S. housing market and credit crisis have undermined the real economy. While growth in the last quarter of 2007 remained slightly positive, many economists and policymakers are expecting that the U.S. economy will go into recession. The valiant efforts of the Federal Reserve to inject substantial liquidity into the financial system and the Bush Administration’s

fiscal stimulus package to prop up the economy notwithstanding, fears of the continuing market turbulence remain. We are in, as many have proclaimed, a “Minsky moment.”

The presenters at this year’s conference are top policymakers, economists, and analysts. They will offer their insights and policy guidelines on the challenges facing the U.S. and global economies. I trust you will enjoy their presentations and the discussions that follow. As always, your comments and suggestions are welcome.

I look forward to seeing you again at future Levy Institute events.

Dimitri B. Papadimitriou

*President, The Levy Economics Institute, and Jerome Levy Professor of Economics, Bard College*

# Program

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**Thursday, April 17**

**10:00–10:30 a.m.**

**WELCOME AND INTRODUCTION**

Dimitri B. Papadimitriou, *President, Levy Institute*

**10:30 a.m. – 12:30 p.m.**

**SESSION 1**

**Historical Precedent and Solutions to the Mortgage Market Crisis**

*Moderator:* Dimitri B. Papadimitriou, *President, Levy Institute*

Jane D’Arista, *Financial Markets Center*

“Broken Systems: Agendas for Financial and Monetary Reform”

Thomas Ferguson, *University of Massachusetts Boston*

“Wizards of Oz? The Politics and Economics of Bailouts in the New Deal and Now”

Alex J. Pollock, *American Enterprise Institute*

“The Logic of the Bubble, the Logic of the Bust”

Walker F. Todd, *American Institute for Economic Research*

“Plans from the 1930s to Rehabilitate Both Mortgage Financing and the Banks”

**12:30–2:30 p.m.**

**SPEAKER**

Paul A. McCulley, *PIMCO*

“A Reverse Minsky Journey”

**2:45–4:15 p.m.**

**SESSION 2**

**Minsky and the Crisis**

*Moderator:* Greg Hannsgen, *Levy Institute*

Jan Kregel, *Levy Institute* and *University of Missouri–Kansas City*

“Using Tools from the Financial Instability Hypothesis to Understand the Subprime Crisis”

Robert W. Parenteau, *Levy Institute* and *MacroStrategy Edge*

“Minsky for More Than a Moment: Why You Can’t Get There from Here”

L. Randall Wray, *Levy Institute* and *University of Missouri–Kansas City*

“Financial Markets Meltdown: What Can We Learn from Minsky?”

4:45–6:15 p.m.

**SESSION 3**

**Impact of the Crisis on the Economic Outlook**

*Moderator: W. Ray Towle, Levy Institute*

Richard Berner, *Morgan Stanley*

“Money and Credit Markets: Dislocations and Policy Options”

James W. Paulsen, *Wells Capital Management*

“Economic and Financial Market Outlook”

Frank Veneroso, *Veneroso Associates, LLC*

“Financial Crisis: Prospect of a Second Wave”

7:15 p.m.

**SPEAKER**

Edward Chancellor, *Grantham, Mayo, van Otterloo, LLC*

“Hyman Minsky and the Great Moderation”

**Friday, April 18**

9:30–10:15 a.m.

**SPEAKER**

James K. Galbraith, *Levy Institute and University of Texas at Austin*

“The Generalized Minsky Moment”

10:15–11:00 a.m.

**SPEAKER**

Robert J. Barbera, *ITG*

“Has Greenspan’s Conundrum Morphed into Bernanke’s Calamity?”

11:15 a.m. – 12:30 p.m.

**SESSION 4**

**Financial Market Regulation-Reregulation**

*Moderator: Jan Kregel, Levy Institute and University of*

*Missouri–Kansas City*

Martin Mayer, *Brookings Institution*

“Unintended Consequences: The Inefficiency of Computer-driven Markets”

William Kurt Black, *University of Missouri–Kansas City*

“Why Greenspan’s and Bush’s Regulatory Failures Allowed a ‘Criminogenic Environment’”

12:30–2:30 p.m.

**SPEAKER**

Maurice Hinchey, *U.S. House of Representatives (New York)*

“Weapons of Mass Economic Destruction”

## Welcome and Introduction

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**DIMITRI B. PAPADIMITRIOU**

*President, The Levy Economics Institute*



Welcome to the 17th Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies. This is a particularly auspicious time to celebrate the work of Hyman Minsky, and we are fortunate to have with us here today his widow, Esther Minsky; his son, Alan; and his daughter, Diana.

These are difficult times for the U.S. economy, but Hy Minsky would not have been surprised. His “moment” has again arrived, as it did during the Asian crisis in 1997 and the Russian crisis in 1998.

Today, many have come to recognize his insights and to proclaim the current condition as a “Minsky moment.” I only wish that legislators and regulators of the financial system could learn something from this experience. Of course, we are trying to help them learn: Minsky’s two seminal works, *John Maynard Keynes* and *Stabilizing an Unstable Economy*, have just been republished in brand-new editions. The publisher, McGraw-Hill, thought it very appropriate to rush both books to publication within six months—something that has never happened before.

Hy Minsky contributed so much, personally and professionally, to the economics profession, to the Levy Institute, and to us. To me, personally, he was the closest colleague, the warmest of friends, a mentor, and a severe but constructive critic. Here at the Institute we have been exploring and extending Hy’s work and taking advantage of his insights, as can be seen by the work of Senior Scholars Jan Kregel and Randy Wray.

For those of you not familiar with our work on the U.S. economy and its relation to the global economy, we run simulations for the intermediate term that are derived from a macroeconomic model developed for the Institute by Distinguished Scholar Wynne Godley, using stocks and flows in an operating framework of the accounting identity, which links the internal and external balances. The internal balance is distinguished by two components, the public and private sectors, and the external balance is, of course, the foreign component. We further disaggregate the private sector into the household and corporate sectors.

At the end of 2007, there was an improvement in the external (current account) balance. The previous year, it was over 6 percent of GDP, and that is because of the changes that took place then in terms of the weakening of the dollar, the government balance, and the private balance.

We have always stressed the importance of the linkages between conditions in financial markets and the real economy, as Minsky had always done. Over the last year or so, we have been reporting on the high probability of a recession and an increase in unemployment, on the assumption that the

financial markets and the meltdown that ensues would slow the pace of household borrowing, affecting aggregate demand and output. Our projections of a drop in household borrowing have come to pass, unfortunately, and a recession is now thought to be rather certain.

Early this year, almost everyone joined the chorus chanting for a timely, targeted, and temporary fiscal stimulus aimed at those who needed money and would spend it quickly—a stimulus limited in size so that it wouldn't add to the government deficit and debt. The amount discussed was about \$150 billion, representing 1 percent of GDP, even though here at the Institute we argued that a much larger, immediate, and sustained fiscal stimulus of at least 2 percent of GDP was necessary. Further, we argued that a plan should be created that might require a much longer additional fiscal stimulus should the slowdown in the economy over the next two to three years become intolerable.

The recently approved stimulus package of \$168 billion will not do very much. Data released by the Mortgage Bankers Association show that foreclosures are at an all-time high; home prices continue to fall; household net worth declined in the last quarter of 2007 by about \$500 billion; and, of course, we still have bloated inventories of unsold units and imperceptibly lower mortgage interest rates.

One cannot be certain of the long-term implications of the financial downtrend and the general turmoil on Wall Street and in markets around the globe, but there is increasing evidence of a broader slowdown or recession on Main Street. Certainly, consumer confidence has plummeted. The March employment figures are more disappointing than the corresponding February figures, with an increase in the unemployment rate from 4.8 percent to 5.1 percent. All these things have a profound effect on the economy, especially on private sector expenditures, given the overindebtedness of the American household.

Because of the currently dire economic conditions, we explored the possibility of an additional fiscal stimulus of \$450 billion, for a total of \$600 billion, to be spread over three additional quarters. We began this analysis from a baseline projection that does not include the recently passed stimulus package. We then simulated the effects of that package, and finally, we ran two other simulations that indicate the effects of a larger fiscal stimulus—a \$600 billion stimulus—spread, again, over four quarters, beginning with the third quarter of this year.

Stimulus plans can be of two kinds: transfers, such as rebates and increases in unemployment benefits that put money in the hands of taxpayers, along the lines of what has been recently approved; or purchases of goods and services such as public works programs that directly add to the GDP. These two types of fiscal stimuli usually have different effects on the economy.

We first simulated a transfer to households and then, alternatively, an increase in government purchases of goods and services. The results indicate that a longer and more prolonged additional stimulus may be necessary, so as not to generate inflationary pressures.

I want to underscore that these simulations are limited to fiscal remedies, even though the recent change in monetary policy has, in some ways, reduced the severity of the current crisis. It certainly has helped banks to lower the cost of capital, and may reduce the interest rate burden on the resets on adjustable mortgages—though, given the evidence, this has not happened yet.

There is, however, a major reluctance on the part of banks to lend to businesses and consumers regardless of the declining trend of wholesale interest rates, and lenders and investors have become risk-averse in light of the existing economic climate. In general, then, the era of easy money is over, at least for the time being.

My focus here, however, is on the fiscal stimulus plans. Policies will need to be developed and established to deal with foreclosures, with mortgage fraud, with failures of financial institutions, and with the rating of securities. My colleagues here at the Institute, Jan Kregel and Randy Wray, as well as the other presenters, will offer some constructive policy suggestions in their presentations.

Our projections of the stimulus plans begin with a baseline scenario that was originally developed last November, one that we called the “soft landing” scenario. I should point out that we also had a “credit crunch” scenario, but I’m going to spare you that scenario because I think you would become so depressed that I’m not sure you would be in the mood to spend two days here.

We call it a “soft landing” because it actually includes relatively optimistic assumptions about the future paths of household and business borrowing. We made the following assumptions: first, that the forecasts of world growth rates by the *Economist* and as outlined by the International Monetary Fund (IMF) in August 2007 were more or less correct; second, that the October 2007 monetary policy stance would continue; and third, that there would be a further 5 percent devaluation of the dollar’s value between October 2007 and the end of the year.

In terms of the three sector balances, we found that a growth recession would take place beginning in the last quarter of 2008, with the annual growth rate slowing to around 1 percent. The current account gap would narrow because of the increase in exports and decrease in imports due to the economic slowdown and the further dollar devaluation, reaching 1.3 percent of GDP by the beginning of 2010. In concert with the improvement in the current account balance, the private sector balance would turn positive beginning in 2009, while the public sector balance (government deficit) would follow the Congressional Budget Office (CBO) projections of August 2007, falling from 4 percent of GDP in 2009 to slightly less than 2.5 percent in 2012, which marks the end of our simulation period.

Next, we constructed a new baseline scenario using assumptions similar to those in the “soft landing” scenario—especially with regard to business and household borrowing. Private sector borrowing has been decelerating, even though, as of the end of 2007, it was still very high at 5.4 percent of GDP, implying a rising debt-to-income ratio. We assumed a continuation of this downward trend in borrowing during the remainder of 2008, with a slight increase beginning in 2009 and stabilization occurring at year 2012. We considered each of the two components, the household and business sectors, separately.

First, we considered the borrowings of the household. We again assumed that household borrowing would continue its decelerating trend for the rest of this year, increase a bit during 2009, and then stabilize, while household debt would turn back downward beginning in 2010, before reaching 100 percent of GDP.

In terms of the nonfinancial business sector, borrowing increased by the end of 2007, reaching 8.3 percent of GDP and accelerating the business debt-to-GDP ratio. Notice also that nonfinancial business borrowing followed GDP growth, with something of a lag, although it has been increasing faster than expected in the last three years. A similar phenomenon occurred in the late 1990s, followed by a drop in the 2000–03 period. We project that that will happen again, with business borrowing dropping in the second quarter of 2008. The overall debt of the nonfinancial business sector will therefore reach a peak of about 76 percent of GDP in 2009, and then decline.

These are fairly optimistic assumptions, and I hope that they prove to be true, although there are indications that they may actually be worse than that.



We based our projections on some other assumptions as well, and these include: first, that the stock market will stabilize at present levels and resume its trend growth from 2009 onward; second, that the market for existing homes will resume rising in 2009, in concert with the general price level, which means that capital gains on homes will not boost expenditures; third, and somewhat optimistically, that oil prices will not increase beyond the present price levels (when I wrote this it was \$110, and now it's even higher); fourth, that the government deficit—along the lines of the CBO predictions of January 2008, without including the recently passed stimulus package—will increase, but then it, too, will decline; fifth, that global output growth will follow the widely accepted forecast by the IMF; and sixth, that monetary policy will not change from the present stance, and that there will be no further devaluation of the dollar, since, unlike the first “soft landing” scenario, the dollar, from the third quarter of 2007, has decreased by 6.9 percent in the broad index of foreign exchange—more than the 5 percent previously assumed.

With all these assumptions taken together, our model projects a further slowdown in U.S. GDP growth from the earlier scenario of 1 percent down to three-tenths of 1 percent, and that there will be a mild recession this year similar to that which occurred in 2001. I must stress, again, that these assumptions are optimistic, and if there is further deterioration, things will not look as pretty as this looks now.

Because of the slowdown in borrowing and therefore in private expenditures, the private sector will regain a positive balance. Furthermore, because of the assumption of the stability of oil prices, the foreign sector—that is, the balance of payments—will improve.

The improvement in the current account is, of course, crucial for the sustainability of this scenario because, if the balance of payments does not improve, government spending will further increase and the private sector balance will go back into negative territory. Again, these are projections and not forecasts, even though to some extent they seem to be in line with the forecasts that Goldman Sachs has been making. We have nothing to do with those, so I don't want to in any way indicate here that there is some sort of collusion involved.

Next, we estimated the impact of the recession on output and unemployment, and compared potential output with GDP growth in our revised baseline scenario. We used as potential output the long-term moving average of real GDP, which is approximately 3 percent. According to our estimates, output in the baseline scenario will be 2.7 percent lower than potential by the end of 2008 and 4.4 percent below potential in 2010, before a permanent reduction of 4.1 percent by the end of our simulation period in 2012.

Then there is the impact of three other scenarios, which represent different stimulus packages. The first one is the impact of the \$150 billion, or 1 percent of GDP, in the form of government tax cuts or transfers starting in the third quarter of this year. This roughly reflects the recently approved plan that will be put into effect beginning later this spring.

A fiscal stimulus of a one-time transfer will have only a temporary effect on the level of demand and output, but it will not affect their growth rate, because in the following quarter, with no additional transfer, the economy is hit by a negative fiscal shock, and output reverts to the previous (lower) growth rate. To have a permanent effect, the government would have to provide a shock to the growth rate. This stimulus of 1 percent of GDP, according to our estimates, will provide an increase in real GDP of about three-tenths of 1 percent, which itself decreases to less than one-tenth of 1 percent the following year. Furthermore, this stimulus is hardly enough to offset the \$260 billion negative shock that we will

incur—that we have been incurring—*each quarter* in 2008. This \$260 billion comes from a fall in private expenditure of about \$100 billion due to reduced household borrowing, and a corresponding fall of \$160 billion in expenditure due to reduced nonfinancial business borrowing.

Now, what about a fiscal stimulus plan? There are two alternatives. First, a fiscal stimulus (in the form of tax cuts or transfers) of \$600 billion—\$150 billion per quarter for the next four quarters, beginning with the third quarter of this year—improves the impact of the outward loss a little bit, but once the stimulus is eliminated after the fourth quarter, the economy is again hit with a negative fiscal shock, and it reverts back to the (lower) baseline path. The total impact of this policy is to raise GDP about 1.2 percent over its baseline value—but again, it's still not enough to offset our estimated 4 percent fall of GDP below potential.

The last stimulus plan that we considered was in the form of government expenditure—on buying or producing goods or services—on the order of \$600 billion, at \$150 billion per quarter, instead of a net transfer. According to the standard estimates of the Keynesian multiplier, a fiscal stimulus of \$1 in the form of a transfer, as the ones before from the government to the private sector, has an impact of 30 cents per dollar of stimulus, as opposed to \$1 in government expenditure, which has an impact of \$1.30. That follows from the fact that government expenditures—infrastructure projects such as bridges and buildings, education, and so on—are part of GDP, and any change in expenditure will thus have an immediate and direct, 100 percent impact on GDP; employees of the government and/or government contractors will spend about 30 percent of that initial dollar, for a total of 130 percent.

This simulation, then, shows that if the policy objective is in terms of the level of real GDP, an increase in government expenditures is much more effective than a transfer; in our simulation, the output loss improves by 1 percent in each of the four quarters. But again, at the end of the fourth quarter, there is a negative shock because there is not a continuation of the government expenditures, leading to a convergence of all paths after 2010 and the permanent loss of roughly 4 percent of GDP.

What can we conclude from all this? First, a \$600 billion fiscal stimulus would not be too much, given our projection of only a moderate recession. For purposes of comparison, let us remember that at the end of 2000, the federal budget was running a surplus equal to about 1.3 percent of GDP. Because of negative GDP growth, that surplus was changed within a year to a deficit of approximately 2 percent of GDP. And it continued this negative surplus until the end of 2004, at the peak of 4.9 percent. So what I'm suggesting is that \$600 billion is only 4 percent.

The second conclusion is that the form of the stimulus package matters.

And third, that a temporary stimulus, even one lasting four quarters, will have only a temporary effect, and as shown, there will be a convergence of all paths after 2010, permanently reducing output by 4.1 percent.

Absent a change in the fiscal policy stance of an average deficit that, as in the past, insures and is consistent with balanced growth and full employment, an enduring recovery will require a prolonged increase in exports and a moderate increase in imports that will close the current account gap.

I apologize very much for these gloomy projections. I hope some of the presenters who follow will have better news to share with you.

So with this, I want to welcome you again to this conference. Thank you very much for joining us.

## Speakers

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**PAUL A. McCULLEY**

PIMCO

**A Reverse Minsky Journey**



Thank you very much, Dimitri, for your kind introduction, and for inviting me to be here. I feel like I'm in a hallowed space, the space where Hyman Minsky spent the last years of his great career. It is a special place, and a very special group of people.

I actually wrote a speech for today, but after hearing the wonderful presentations this morning, there's no need for me to read that speech to you, so I'm going to speak extemporaneously on a few things. That speech will be posted to PIMCO's web site; if you want to know what I was officially going to say, then you can go there.

Let me tell you that, while the Levy Institute is a think tank, Minsky's work is not just think-tank work. It's also not just policy-wonkish work. It has real, practical implications in the world that I live in. At PIMCO, we manage three-quarters of a trillion—with a  $t$ —debt units. They're sometimes called bonds, but here I think I should call them debt units. I introduced our CIO, Bill Gross, to Minsky's thinking about six years ago, when we had the corporate scandals associated with WorldCom and Enron and so forth. We were in an investment committee meeting, and I said, "Bill, it's very simple: it's a Minsky moment"—a phrase I'd coined back in 1998. And he said, "What do you mean? Who is this Minsky guy?" I said, "Bill, you have got to get up to speed here." So he said immediately, "Give me his work." I had my copy of *Stabilizing an Unstable Economy* (1986) right on my shelf at the office, so I lent it to Bill. He read it cover to cover. By 2006, he had become a disciple, if you will.

I say "disciple" because the whole framework of Minsky has a very simple core thesis. We all know it: stability is destabilizing, because market participants, or economic agents, being human beings, extrapolate stability into infinity. And, if you extrapolate stability into infinity, then you inherently take on ever more risky debt structures. That is a Nobel Prize concept, that the world is not inherently mean-reverting on the basis of value. The world is inherently momentum-driven. Human beings are inherently reflexive. Intellectually, we know to buy low and sell high, but emotionally, we can't bring ourselves to do that; we tend to do the exact opposite, which imparts an intense procyclical character to capitalism. Perhaps even worse, it imparts procyclicality to regulatory structures. Not only are the kids and the frat party procyclical, but the guidance counselor is too. That's a reality of financial markets.

Minsky gave us a wonderful way to track how stability begets instability that you can incorporate when managing \$750 billion. Two thousand seven was probably the best year in the history of PIMCO because we saw "the moment" coming. We were actually about six months early, but that's okay, because

once the moment happens, all hell breaks loose, and then you begin what I've dubbed the "reverse Minsky journey." And that's what we're on right now.

We all know the three stages of the forward journey. You start with hedge units, then proceed to speculative units, and then, finally, to Ponzi units. We've all taught it; we all know it. That's the forward journey: you go from hedge, to speculative, to Ponzi finance. The reason you make that journey is that the very act of moving from one step to the next drives up asset prices and therefore validates the risk-seeking behavior. As long as asset prices are going up, it covers all sins. But you reach a point where there is a fundamental evaluation barrier that you can't get over, and that creates the meltdown.

In the housing market that we just went through there were actually three bubbles along the forward Minsky journey, not just the housing market bubble per se. This trio of bubbles was very similar to the Three Stooges: they complemented one another. The Three Stooges wouldn't have been the same without Larry, and in this scenario you can decide which one was which. The three bubbles were property valuation, mortgage finance, and the "shadow banking system"—another phrase I've coined—and they essentially operated in tandem to create what happened. They're operating in tandem right now, in the reverse Minsky journey.

In the middle were the mortgage originators, who were operating on the originate-to-distribute model. They had no skin in the game—no active interest—because they simply originated the loans and then repackaged them. But who they distributed these packages to, interestingly enough, were what I call the shadow banks. I define a shadow bank as a levered-up intermediary. That's what a real bank is, too, but a shadow bank is a levered-up intermediary that does not have a form of liquidity protection. And the two key forms of liquidity protection are access to FDIC deposit insurance and access to the Federal Reserve's discount window as lender-of-last-resort support.

So we had an originate-to-distribute model and no skin in the game for the originator, who would sell it all into the shadow banking system. The most important of the shadow banks are investment banks, hedge funds, CDOs (collateralized debt obligations)—the whole alphabet soup.

Now, the guy in the middle was being asked to create product for the shadow banking system. The system was demanding product. Well, if you've got to feed the beast that wants product, how do you do it? You have a systematical degradation in underwriting standards so that you can originate more. But as you originate more, you bid up the price of property, and therefore you say, "These junk borrowers really aren't junk borrowers. They're not defaulting." So you drop your standards once again and you take prices up. And you still don't get a high default rate.

The reason this system works is that you, as the guy in the middle, had somebody bless it: the credit-rating agencies. The shadow banking system didn't have access to a lender of last resort but it could issue asset-backed commercial paper, because Moody's and the S&P would put an A-1/P-1 rating on the commercial paper, which in turn would be bought by money market funds.

It is inherently an unstable structure. One key reason is that the degradation of underwriting standards will not be revealed during the bull market cycle. It will only be revealed over a full cycle. But the S&P and Fitch and Moody's put their stamp of approval on the securitization of junk mortgages by looking at only one period of a bull market, not a complete cycle. It's an in-built problem of putting ratings on new innovations, because you haven't have a chance to observe a historical track record—to see their performance over a full cycle. So a key part of keeping these three bubbles going was that the rating

agencies thought the default rates were low because they *were* low. But they were low because the degradation of underwriting standards was driving up asset prices.

I'm coming to the point where I think I'm going to coin a new phrase for you. We have three stages in the forward Minsky journey, and you know what they are: hedge, speculative, and Ponzi. I would suggest there's a fourth stage, and for now I'm going to call it "Ponzi squared." We were a little early in looking for the Minsky moment, because we forgot to think that there might be a stage beyond Ponzi—that, once you get to the Ponzi stage, you *anticipate* "the moment." You only arrive at the moment once you've gotten to Ponzi squared.

Let me define for you what Ponzi squared is. In the mortgage market in 2005–06 and early 2007, the marginal loan or debt unit actually was not a loan. The marginal loan unit was no money down, no documentation of ability to pay, with a teaser rate and negative amortization. Think of those four characteristics. That actually isn't a loan. It's a package of an at-the-money call option (to buy the house at the current market price) and an at-the-money put option (to sell the house back at that price)—for free.

Suppose your broker called you up and said, "We've got a special today. We will give you an at-the-money call and an at-the-money put on 10,000 shares of IBM." What would you say? "YES! What's the charge? They're at the money?" "Yeah, an at-the-money call and an at-the-money put—you can have them for free." Most of you would say, "Mine! Shoot it in. Can we do it for 20,000 shares? Why only 10,000 shares? More!" You'd do it until he said he's got no more, right? Well, that's what the marginal unit was at the top of the cycle, which is why I'm calling it Ponzi squared. The definition of a Ponzi unit is when you borrow money to buy an asset and the income from the asset is not only insufficient to amortize the principle but also insufficient to pay the interest in full. When there is zero down, that creates the next step beyond Ponzi. The Ponzi unit isn't defined by the terms of whether or not the borrower has skin in the game; it's the deficiency of cash flow to pay interest or amortize the principle. It's agnostic, essentially, on the issue of skin in the game. A unit is Ponzi squared if it has all the characteristics of a Ponzi unit and you've got no skin in the game, because then you have something extremely valuable being given to the speculator for free: an at-the money call and at-the-money put. None of us would pass up that kind of thing.

Essentially, the shadow banking system was giving away that package of options—long-dated options struck at the money—to marginal borrowers. If you ran those options through a Black-Scholes option pricing model, you'd find they were very, very valuable. Let's look at a marginal borrower holding this Ponzi-squared package. If the value of his house went up—that is, the call option went up—then he had to make a token interest payment to stay in the game. So he would make the token interest payment, at a teaser rate. Moody's and S&P would say, "Okay, he's a good borrower." No, he's just rationally protecting a position where the call option has gone "in the money," or significantly below market price.

But what happens when a call option goes *out* of the money and the put option goes *in* the money? The put option is defined as the fact that, in most states, the lender can either go after the collateral or after you, but not both. Subprime buyers didn't have anything else, so essentially they had a put. And how do you exercise the put? You dump the asset. That's the only way you can exercise the put. And the put is valuable, because if you exercise the put, you can discharge debt that's greater than the value of the asset that you "borrowed against."

When the put goes in the money, the logical thing for that Ponzi-squared borrower to do is to remember the last words of Paul Simon from his most famous tune of 1975. Anyone remember what

that tune was? “50 Ways to Leave Your Lover.” “*Just slip out the back, Jack / Make a new plan, Stan.*” Anyone remember that one? What was the last part of that stanza? “*Just drop off the key, Lee, and get yourself free.*” That’s how you exercise the put. You start whistling Paul Simon down to the post office, drop off the key, Lee, and get yourself free.

Actually, we discovered just a little over a year ago, in the first quarter of 2007, that, indeed, the Ponzi-squared unit was the marginal unit. That was right before we had the blowup of the hedge funds at Bear Stearns, when we had the advent of something called the early-payment delinquency, which is when someone misses a payment *in the first three months* of their mortgage.

When I bought my first house, in 1988, I was 31 years old. I put down 20 percent, which I’d saved up over five years, and there was no way that I was going to miss one of my first three payments. *Because I had 20 percent in the game.* But if I have nothing in the game, if the put goes in the money, the logical thing is to default, because it’s the only way you can monetize the value of the put. And that revealed itself in January and February of 2007 with soaring early-payment delinquencies. So the marketplace can’t say that it wasn’t warned. Anybody who understands Minsky knew that the early-payment delinquency was a sign that you had reached at least the Ponzi stage, if not somewhere beyond. And the somewhere beyond, I’m submitting, is called Ponzi squared, because the debt unit isn’t a loan but a package of options given away for free. That’s my contribution to the lexicon of people who are in the Minsky Club today.

Now let’s get very practical. The reverse Minsky journey is all about reversing what happened on the forward Minsky journey. When you’re moving out, rising home prices cover all sins. When you’re moving in—when you’re on the reverse journey—falling home prices reveal all sins and misdemeanors, because everyone is trying to delever at the same time. Or, to borrow from the great Warren Buffett, we don’t know who’s swimming naked until the tide goes out.

Over the last year, the tide has gone out, and now we see who was swimming naked. Even worse, we see fat men in Speedos. The key issue is that, when the tide went out, the inherent liquidity risk of the shadow banking system was revealed. In a period of three months last year, starting in August, the shadow banking system could not roll \$350 billion of asset-backed commercial paper—and remember, asset-backed commercial paper was their “deposit.” There was a run on the shadow system, forcing it to delever, driving down asset prices, eroding equity—and forcing it to delever again. It self-feeds on the way down, just like it self-feeds on the way up. It’s incredibly procyclical.

The regulatory response is also incredibly procyclical. You have a rush to laxity on the way up, and you have a rush to the opposite on the way back down. And essentially, on the way back, you have the equivalent of Keynes’s paradox of thrift—the paradox of delevering. It can make sense for each individual institution, for a shadow bank or even a real bank, to delever, but collectively, they can’t all delever at the same time. It is a total parallel to the paradox of thrift, which is: let’s not all decide at the same time that we’ll become Calvinists and increase our savings rate, because we will certainly have a depression if that happens. Not everybody can save more at the same time, because if they try, we’ll all save less, because we’ll kill aggregate demand and income, the tree from which savings flow.

To break the paradox of thrift, Keynes said, use the public’s balance sheet: run deficits. But how do you break the paradox of delevering? Use the sovereign’s balance sheet. That’s effectively what we were talking about earlier this morning. We’ve got a problem: we’re on a reverse Minsky journey. The private sector wants to shrink and derisk its balance sheet, so someone has to take the other side of the trade

to avoid a depression. That someone is the guy who owns a printing press and is allowed to print legal tender and who gets his ink for free. That happens to be, in a most direct sense, my dear friend Ben Bernanke. But in a broader sense, it's the sovereign.

We pretend that the Fed's balance sheet and Uncle Sam's balance sheet are in entirely separate orbits because of the whole notion of the political independence of the central bank in making monetary policy. But when you think about it, not from the standpoint of making monetary policy but of providing balance sheet support to buffer a reverse Minsky journey, there's no difference between Uncle Sam's balance sheet and the Fed's balance sheet. The Fed kicks back to the Treasury all the fruits of seignorage (the difference between the cost to produce money and the money's face value), so it's effectively working for we, the people. The Fed's got a really, really cool balance sheet. They have \$800 billion in assets, which we discussed earlier. They also have \$800 billion in liabilities, the preponderance of which are Federal Reserve Notes. It actually says that right at the very top of each one: *Federal Reserve Note*. But there's no coupon attached to it. I keep looking for it, but I can't find the coupon: it's a zero-interest note. It's a really cool business. You issue these, with zero interest, as your liabilities, and you buy Treasury securities to pay interest. That is the ultimate in spread banking. And in fact, the Fed kicks back the \$32 billion—it's called seignorage revenue—each year.

If the Fed takes dodgy assets onto its balance sheet and loses money, then it reduces the rebate to the Treasury. So don't think in terms of the Treasury's balance sheet and the Fed's balance sheet and a reverse Minsky journey as being separate. Economically speaking, they're one and the same. In extremis, you could essentially approach Milton Friedman's hypothetical "helicopter drop" of money. That's when the monetary authority effectively subordinates itself to the fiscal policy authority—which is what happened in Japan, obviously, when they went to quantitative easing a number of years ago.

So the reverse Minsky journey that we're on—I think we're pretty well advanced on it. The reverse journey is a lot quicker than the forward one for a very simple reason. The forward journey is essentially momentum-driven; there is a systematic relaxation of underwriting standards and all that sort of thing, but it doesn't create any pain for anybody, whereas the reverse journey does create pain, otherwise known as one giant margin call. The reverse journey comes to an end when the full faith and credit of the sovereign's balance sheet is brought into play to effectively take the other side of the trade. No, I'm not a socialist; I'm just a practical person. You've got to have somebody on the other side of the trade.

The Fed took a giant leap forward for mankind—at least I think so—on Sunday, March 16, when it opened the discount window to the primary dealers. Bernanke did not want to do that—that's the last thing in the world he wanted to do. But the alternative was even worse. And that created a firebreak that's unusually important, because the biggest shadow banks are the investment banks. They were brought under the Fed's liquidity umbrella so there wouldn't be another Bear Stearns. You've effectively taken the sovereign out from the real banking system and into the shadow banking system, because you can look at the investment banks as becoming part of the real banking system, since they now have access to a public good—the discount window.

However, there's an important issue here: for those banks, along with access to that public good, the Fed's balance sheet, comes obligations and responsibilities—notably, listening to their regulator. My key belief is, if you're going to have access to the Fed's balance sheet, you have to be regulated by the Fed, not by the Securities and Exchange Commission. I think that will unfold in the years ahead, and

will be part of the restructuring of the architecture as we reintermediate back from the shadow system into a more bank-centric intermediation system. A bank-centric system, since it is backstopped by the sovereign through access to the Fed's discount window, has to be regulated, and it needs to be regulated in a countercyclical way, to check excessive developments. Now, that may be a hope, but actually it would be good to have regulation that had a countercyclical character to it, that somehow you restrain economic growth on the way up but relax controls on the way down—as opposed to what we've got right now, which is, you relax it on the way up and then restrain it on the way down. So we will get regulatory reform, because what Bernanke did on March 16 was a watershed moment that will actually help shorten the time needed to reach the end of the reverse Minsky journey.

The next big step is to have Uncle Sam's balance sheet take on the mortgages at a "haircut" price, below face value—to nationalize, in some respects, the subprime mortgage business. But, in fact, you're nationalizing nothing, because it doesn't exist anymore. You're effectively nationalizing the remnants, and making the shadow banking system and the real banking system that sold all of these free puts take a loss. If you short a put and the underlying asset goes down, what happens? You lose money. They shorted the put, therefore they deserve to lose money. Uncle Sam refinances it to the amount that the put is in the money, and Uncle Sam gets to share in the upside once that's done.

That's the essence of the approach. House Financial Services Committee Chairman Barney Frank's plan—the proposed FHA Housing Stabilization and Homeownership Retention Act—is the framework. Senator Dodd's gotten on board with it. We at PIMCO have publicly come out in favor of it. It will mark, I think, the final leg of the reverse Minsky journey, which means that the time is rapidly approaching when we at PIMCO, and I think you as well, will want to think about playing offense rather than defense. We played defense and won big, but you reach a point where you've delevered the system and cheapened asset prices to the point that you need to get off defense and get on offense. Determining exactly *when* you do that is the toughest thing in my business. The more the sovereign's balance sheet is brought in to offset the impact of the delevering, the closer is the day you need to throw down your sword and join the other side and become risk-seeking. When you have high-quality assets, independent of the grade, that have been beaten to death because you've had forced sells, and you can buy them at a price that provides equity-like returns—11, 12, 13 percent—you're supposed to get off the defense and get on the offense. That's what we spend three hours a day in investment committee at PIMCO saying: How close are we to that day? That's the issue we're grappling with now.

Everything I've said for the last 45 minutes comes straight out of Minsky. He's not with us, but his ideas don't just live in think tanks. His ideas live in the real world, where real money is on the line. And he is an honorary member of PIMCO's investment committee.

Policy responses always have collateral damages, and speaking somewhat metaphysically, we shouldn't be where we are right now. If we had had a responsible, preemptive, prophylactic regulatory regime, we wouldn't be here. But we are here. And since we're here, we've got to do things that we wouldn't otherwise do, and accept the consequences. It simply means that the American standard of living is going to go up less quickly than otherwise would be the case. There are two alternatives: we can accept a somewhat higher level of inflation, and a somewhat higher level of socialization and less capitalism in our economy; or we can accept a depression. It's a multiple-choice exam. Those are choices a and b. You can't have Goldilocks; she's not on the test. She's gone, and like Amelia Earhart, she's not coming back.



I've always thought that a regulatory apparatus should be countercyclical. I preached—not just spoke, but *preached*—until I was blue in the face during the last 18 months of the late-'90s stock market bubble that Fed Chairman Alan Greenspan should increase margin requirements. Also, throughout the whole bull market and the bubble in property prices the Fed had the legal right to declare what was a kosher loan—not just for institutions under their supervisory control but also for anybody originating—and he explicitly refused to use that power to define minimum-down-payment loans. To me, having no skin in the game is what created the Ponzi-squared unit, and in each case Greenspan refused to use that tool because of his Ayn Rand ideological perspective. Yet, if you go back to the minutes of September 1996—three months before he uttered the “irrationally exuberant” speech—he explicitly said in a Federal Open Market Committee meeting that he believed a hike in margin requirements would be guaranteed to work. So he's been dancing like Fred Astaire on this issue for a long, long time. But he should have done it—he should have done it during the last two bubbles. It makes so much sense that it's hard to see someone arguing the other side. But they do.

As long as we have reasonably deregulated markets and a financial system that has severe principle-agent problems, you will have Minsky journeys, forward and back, punctuated by Minsky moments. That is reality. You can't eliminate them. It's a matter of having the good sense to have in place a countercyclical regulatory policy to help modulate human nature. Human nature is as human nature does, as the famous economist Forrest Gump says. But you can, as with your children, tame human nature at the margin.

Thank you very much.

**EDWARD CHANCELLOR**

*Grantham, Mayo, van Otterloo, LLC*

**Hyman Minsky and the Great Moderation**



Dimitri was very kind in his introduction. The great and good of the media world were gathered today at the George Polk Award ceremony, where I was given a generous introduction as a man who had anticipated this financial crisis. [Chancellor was honored for his article “Ponzi Nation,” which appeared in *Institutional Investor* in February 2007.] I said that I was just using a model of analysis provided by an economist who’d been dead a few years, one who I felt hadn’t really received the attention that was his due. In fact, when I wrote the *History of Financial Speculation*

some nine years ago, I genuinely hadn’t read Minsky. That was my fault—I was being autodidactic and reading only what came my way. I knew Charles P. Kindleberger and had read his book *Manias, Panics, and Crashes: A History of Financial Crisis* (2000), which made reference to this person Minsky—but one can’t chase after every reference. Then, a couple of years later, a friend of mine who ran a hedge fund said, “Why don’t you spend some time understanding the credit boom?” So I said, “Fine, give me some money and I’ll just go off and do that.”

I then spent a few months reading about the history of credit, starting with Daniel Defoe, who is also a hero of mine. Defoe knew about bad credit, because he had gone bankrupt in 1690, with £17,000 worth of debt—nothing to sneeze at in those days—and he wrote very lucidly about credit. My reading then progressed through the 18th century (not much interesting to read but Henry Thornton), the 19th century (John Stuart Mill), and on to the 20th century and the Austrian School. And then, I came upon Minsky.

Minsky was sort of an apotheosis for me as I began to understand how things worked. I had only a model to follow. I knew things weren’t right intuitively, but I didn’t really know how to bring my arguments together.

Two or three years ago, we had this notion of the Great Moderation, which, to my mind, was really a reiteration or a rephrasing of the notion of the New Paradigm that we had seen in the 1990s and that was later discredited by the collapse of the stock market bubble. The New Paradigm was essentially the idea, put forward by analyst David Shulman of Salomon Brothers, that as a result of better handling of the economy by monetary authorities—leading to fewer and less severe recessions, and manageable inflation—equities should trade at higher multiples than in the past (the “valuation paradigm” had changed).

The Great Moderation was rephrased by Ben Bernanke and other central bankers around 2003—just at the time I was reading Minsky for the first time. The other day, I was looking at Bernanke’s *Essays on the Great Depression* (2005). Being a proper Minskyan, I actually go to the index of every book to see whether there’s a reference to Minsky. Funny enough, there is one such reference in Bernanke’s book, though I’m afraid he appears only in a footnote.

Bernanke writes, “I do not deny the possible importance of irrationality in economic life. However, it seems that the best research strategy is to push the rationality postulate as far as it will go.” Now, I don’t know if any of you picked up on what he was saying before this housing crisis came about. Roughly a year ago, he was talking about capping the mortgage losses at \$50 billion, and now the International Monetary Fund is even coming out with an estimate of \$1 trillion in losses. But even prior to that, Bernanke belonged, as you all know, to the school that said, *You can’t analyze the bubble; you deal with the aftermath*. House prices were going up and something very good was going on in the American economy, so why intervene? I tried to use Minsky’s analysis to counter the Bernanke view.

As a slight aside, I also became interested in why I was so attracted to Minsky—not just as an economist, but because, by training, I’m a historian. I find that, when you read about Minsky, you read about his varied influences—Karl Marx; Mill; John Maynard Keynes, obviously; Irving Fisher; and Joseph Schumpeter, who was a big influence. But there was a deeper, intuitive resonance for me. For instance, without getting too New Agey, there is the notion of the yin and the yang in ancient Chinese Taoist philosophy, where each movement contains the seeds of its opposite, reaches its apogee, and then gives way to another movement; and that this is an endless cycle—that was an idea that, funny enough, I’d latched on to in my futile attempt to understand financial and economic cycles before I’d read Minsky. Then, when I read Minsky, I thought, *He’s a Taoist*.

And then you find in ancient Greek philosophy the notion of *hubris* giving way to *Nemesis*. I haven’t done any work on it, but a friend of mine, who’s an idle poet, did some research for me, and he actually found a fragment of writing by Euripides that reads, “Wealth begets hubris, and Nemesis follows hubris”—Nemesis being the goddess of divine retribution. So again, there’s a sense of something innate.

Another area that might seem strange is the field of traffic management, which I refer to in my piece in *Institutional Investor*. There’s a fellow at the University of London called John Adams who has written an excellent book on the subject of risk that has nothing to do with finance.<sup>1</sup> It has all to do with the notion that when we face improvements of risk in the outside world—while driving, for example—we respond to that by taking an efficiency gain without actually reducing the level of risk that we are prepared to take. So Adams had this notion of a risk thermostat. What’s interesting is that the number of people who die in car accidents in America today is some 50 percent above the level of deaths in the late 1920s or in the 1930s, despite all the improvements in safety glass, seat belts, and air bags, and the fact that you have to pass a driving test and can’t drive while drunk anymore. Nevertheless, we manage to kill one and a half times as many people on the roads as we did back then. So this notion of the risk thermostat seems, again, to be implicit within the Minsky analysis.

Finally, because I am a historian and have done a certain amount of work in that area, I was aware that the 1920s in the States and the 1980s in Japan were also periods of Great Moderations—or, if you will, New Eras—with low volatility of GDP growth and inflation, and massive credit growth, with both eras ending in tremendous busts.

So, what did I learn from my research? (This is all old hat to you Minskyites.) I learned several things: not only the notion of stability giving way to instability—which, as I said, has these ancient roots that seem to me to be deep within mankind—but also, more specifically, Minsky’s analysis of the stages of capitalism, namely, not to observe a capitalist system as a given but to understand that there are actually institutional arrangements, and that the different institutional arrangements beget different types of behavior.

The other key point was his emphasis on financial innovation, competition, and, particularly, the drive toward regulatory arbitrage—the way in which whatever rules you set for Wall Street and the financial markets, it is like water flowing down a hill: it will get around the barriers in its way. I’ve given up trying to suggest fixes and cures for the current crisis—not because I think I don’t have anything much to say, but because once you become imbued with that view, you become aware of the unintended consequences of any legislation. So many of the regulatory suggestions that come our way today seem to me to be like Maginot Lines—barriers erected to stop them from doing what they’d done in the past and might do again. Of course, you know they’re going to come around the end of that piece of regulation and invade France anyway, with all its consequences.

What seems obvious to us but perhaps not to everyone else is this shift from so-called hedge finance to so-called Ponzi finance. If you can understand that notion, if you can identify Ponzi finance when it exists, then you have an analytical advantage over everyone else.

Another thing I learned was this interconnectedness of balance sheets and cash flows which, as Dimitri and I were discussing, was linked to Minsky’s time as a director of the Mark Twain Bank in St. Louis—his brilliant understanding that there is an interconnectedness, a network, within the financial and economic system. With all due respect to James Paulsen, who, like Daniel in the lion’s den, stood bravely before us earlier today (see pp. 61–62)—and again bearing in mind that I’m trained as a historian, not as an economist—I tend to yawn at the macro or top-down analysis, because it never seems to tell the underlying story. What I find more interesting are these connections within the financial system. I was trying to think how one could explain it in a more populist way. There’s a movie called *The Matrix*—which, incidentally, has a weird quasi-Buddhist underlying theme to it. But the interesting thing about *The Matrix* is that there is a force that these people are trying to fight, and it’s only when they understand that it’s all just digital code that they can seize control from their enemy.

In a way, Minsky looks through the capitalist system and sees a kind of digital or financial code that is actually much more important than all this macro nonsense that those poor students who have to study economics at university have thrust down their throats—to me, it’s neither here nor there. None of these things tell you anything—they don’t tell you that a crisis is about to happen. But the Minskyan analysis does.

I don’t want to take you through what you’ve already heard today, but clearly, the new financial system created in the last few years, if you look at it in a sort of Keanu Reeves-type fashion, was flawed. Minsky says, all capitalist systems are unstable, and some are more unstable than others, and this looked to me like a very unstable system, with certain qualities in common with what Minsky had referred to as the “banking capitalism” of the 1920s. In other words, it was dominated by Wall Street guys who were out for their own good. But in some ways it was even more insecure, in that this credit system encouraged an endless amount of leverage, and also encouraged and facilitated regulatory arbitrage.

On my way here today I was reading a report by an analyst at JPMorgan in London who argued that the amount of maturity transformation—borrowing long and lending short—that was happening in the securitized credit field amounted to \$4 trillion. Everyone’s bandying these huge figures around. My view was that one could understand a lot of what was going on using the Minskyan analysis, up until last summer. But there were lots of things one didn’t know unless one was employed by an investment bank in the more boring branches of these banks where they were doing these crazy things. When I was writing the piece “Ponzi Nation,” I rang up a few people and asked them to tell me what was happening.

Someone said, “Well, you know, there are these structured investment vehicles.” “What are they?” I asked. Who’d heard of a “structured investment vehicle”? Yet here they were, a maturity transformation in the securitized credit world that was dependent on liquidity that suddenly disappeared. And those of us who didn’t know or who hadn’t bothered to do any work on structured investment vehicles suddenly decided that they were a \$450 billion pain in the . . . head.

The other thing about the securitized credit system is that, together with credit insurance, it allowed an almost limitless amount of arbitrage, or leverage. In the case of one of these bond insurers, American Capital Access, it had \$60 billion of that and outstanding credit defaults, and less than \$500 million of capital.

With regard to the thesis that stability is destabilizing, one way I adapted the Minskyan analysis was to see this in terms of options. Low volatility equals cheap options, and what one did see during the boom period was that, in effect, the bankers were selling people call options for things that were expected to rise in value. For instance, it was quite rational if you were a so-called subprime borrower and had a low credit score to go long and buy a house; you didn’t have to put any money down because you picked up any gain in the rising value of the house. But if the value of the house fell, you also had a put option. So in this way you can bring the conventional modern finance theory to bear on the Minskyan analysis. What happened is that, when house prices began to fall, people did start putting the houses back to the lenders. So what you could say is that the lenders had sold out-of-the-money puts at not very far out of the money, so they were highly exposed to default.

Exactly the same dynamics were happening in the private equity world. Last year I got a bit bored with the housing bubble, because the housing bubble happened all over the place, and then I got rather obsessed with the private equity bubble. There, too, you saw these similar Minskyan dynamics taking place, where the private equity people were buying companies at very high debt-to-equity ratios, with no margin of safety. They forced the lenders to lend to them with very loose covenants, and that had the effect of extending the duration of the call option that they had on the company they were buying. The loans also had these same negative amortization features.

I spent some time looking at an Australian bank called Macquarie. It’s a pure Ponzi manufacturing company. It bought something called the Indiana Toll Road at 60 times EBITDA (earnings before interest, taxes, depreciation, and amortization, or operating cash flow). It piled up debt of 50 times EBITDA. Within a few months, Macquarie had taken a revaluation profit, endorsed by its accountants, Price Waterhouse, and then borrowed against that “profit” to distribute an earned dividend to the widows and orphans back in Australia who owned the Macquarie Infrastructure Group’s stock through their superannuation fund. That, to me, was a very Minskyan thing.

Then, of course, a very simple Minskyan analysis would have told you exactly what was going on in the commercial real estate market in February of last year. The Equity Office Properties real estate investment trust was taken over by Blackstone for \$39 billion, at what they called the cap, or capitalization, rate—the discount rate used to determine the present value of a stream of future earnings. The rental income from this property was considerably less than the amount that Blackstone was paying for Equity’s portfolio, so the guy who’d done the deal, the biggest leveraged buyout ever, couldn’t actually celebrate the purchase of this company because he was so busy selling off parcels of the Equity portfolio so that the company would be cash-flow positive. There were parts and parcels of Equity Office Properties that were then resold at even lower cap rates—in other words, at higher valuations. (I think

one parcel changed hands three times in one month.) In a highly leveraged deal, real estate mogul Harry Macklowe paid Blackstone \$7 billion for seven class-A properties it had acquired from Equity. But he didn't *pay* \$7 billion; he paid \$50 million and borrowed the rest, principally from Deutsche Bank, using the General Motors Building and several other Manhattan skyscrapers as collateral. It was short-term financing, and with the note past due, the GM Building is now on the market.

An actual real estate guy says, in a sort of Minskyan dynamic, that they do well when asset prices are rising and these Ponzi finance bets turn out well; then, when the market turns against them, they do badly. I notice that half the people who lost fortunes in the last year were the same guys who lost fortunes in the early 1990s. I guess it sort of pays them to play their game.

Likewise, I would say that the hedge funds playing in the credit market game were also, in effect, selling out-of-the-money auctions, that they were going long credit and taking the premium income from going long credit. In the good times you leverage and get some earnings, and then you have a high Sharpe ratio and you look like a genius. Then everything falls to pieces and you blow up. That's happened a few times.

I'd also like to address the value of risk models. To my mind, they are rather like the risk thermostat that John Adams described: the less volatility we saw in the markets, the more risk the banks and the hedge funds took on. Good risk managers allowed these people to take on more risk. What's interesting about the value of risk models is that they specifically avoid the tail risks—about when things go badly. In good times they say, *Let's take on more risk, because there's been less risk recently*. So there's a tremendous procyclicality to risk taking—which, again, is one of Minsky's great insights. I think that the value of risk models is being discredited now.

Finally, I do feel I waited a long time for the bust. I must say, you saw the subprime start to blow in February, and then this private-equity thing went sort of completely crazy. And I retired from active journalism to work on a book. At the time I thought, *Perhaps I'm wrong. Perhaps this bloody system is as robust as they're telling me!* Then I felt like someone in one of those silent movies who turns away from a building, and suddenly, the moment their back is turned, it collapses. That's more or less what happened when I stopped writing.

With regard to the bust phase, I have to say I find the Minskyan analysis less of a light, I'm afraid. I find this a very complex moment to study. We have the collapse of the securitized credit system, and massive intervention by the Federal Reserve. I'm sure if the Fed did nothing we would have a very exciting debt deflation, but that's not what we've got. We've got the Federal Reserve fighting back. We've got U.S. households questioning whether they can continue to run a deficit. We've got a boom in the emerging market in China, and America is setting interest rates that may be appropriate for a credit bust over here but not necessarily appropriate for conditions in China. I suppose that will lead to a bust in China at some stage, but I don't quite know the timing of that.

Having said that—and that may be my own obtuseness—I'd be very pleased if someone came up to me and said, "You fool, this is how you should be analyzing the bust, in a very straightforward way." But as Minsky said about past busts, history is, after all, just history; and whereas the period of the bust, to my mind, has these very recognizable commonalities, like Tolstoy's unhappy families, each crisis has its own story. And the crisis that we're going for at the moment doesn't really have a clear end, to my mind, or a clear model from which to understand it.

My view is that the behavioral model Minsky has shown us is not one based on the stupidity of people on Wall Street but on the rationality of agents in financial markets—if only people could begin to understand that. I recently did a Factiva search and found that there have been 200 newspaper references to Minsky in the last year, and these are not fly-by-night publications: the front page of the *Wall Street Journal*, the *New Yorker*, and, in England, the *Economist* and the *Spectator*. These are the most prestigious newspapers and journals in the world, and they have woken up to this. I don't know whether that means academia has woken up to it. On the institutional investment side, I think the better fund managers are alert to it; the poorer fund managers just stick their fingers in their ears because they don't want to hear anything bad. But, in the end, I'm reasonably optimistic, and I think I've played a small role, minute compared to what the Levy Institute does, in trying to bring this analysis forward and put it in front of the public so that perhaps they can use it in future.

Thank you.

### **Note**

1. J. Adams. *Risk*. London: UCL Press, 1995.

**JAMES K. GALBRAITH**

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### **The Generalized Minsky Moment**



Dimitri, thanks very much. It's always a pleasure to be here. I feel very much at home.

I have been coming to these conferences for many years, and they've always been inspired in one way or another; but I must say, the title of this one, "Is the Financial System Working?" raises the art form of the rhetorical question to an entirely new level.

I want to do something here that's a little bit different, and that is to talk not so much about the financial crisis directly, although I'll come around to it at the end; but about the larger international, political, and security context within which the events that we're witnessing are occurring. So in

some sense I'm going to be speaking today from the standpoint not only of my participation over many years with the Levy Institute but also of my involvement with Economists for Peace and Security, which gives me an obligation, sometimes, to move from one frame of reference to the other. And on occasion, as when I was preparing this talk, I get stuck squarely in the middle.

Whether the current financial crisis is a bona fide Minsky moment is a matter for debate, and I'm sure it was under considerable discussion yesterday. In a paper circulated recently, Paul Davidson of The New School absolutely disputes that the subprime mortgage situation constitutes Ponzi finance in the technical sense that Hyman Minsky intended. I'm not sure whether I agree or not—I don't at first disagree—but the fact remains that current events have again raised the profile of Minsky's contribution, and that is assuredly a good thing.

What I'm going to try to do here is to take advantage of that and to suggest that Minsky's taxonomy of financial behavior can be generalized beyond its original sphere of application. So what we'll be discussing here is what we'll call a "generalized Minsky moment."

The concept of systemic instability is the cornerstone of Minsky's work. He argued that system dynamics inherent to capitalism breed fragility and crisis; specifically stability spurs risky behavior, and risky behavior leads to crisis. As he put it most succinctly, "Stability is destabilizing."

This notion is based on a clear and detailed analysis of modern financial capitalism, but it is also rooted in human psychology and behavior. There is nothing that restricts the application of the insight to the pecuniary realm, and it's therefore a little astonishing that not very much has been done to extend the basic conceptual framework to other areas of social and political analysis. This paper is an effort in that direction.

My intent is to take the theory of financial fragility into the realm of international relations—in other words, as a modest objective, to sketch an analytical framework that may help to describe the



economic, political, and military interaction of nation-states in the light of Minsky's famous analytical distinction between hedge, speculative, and Ponzi finance. I'll do this, to the extent that time permits, in two parts: first, outline the theory; and second, present a very brief overview of modern history, using the terminology that the theory offers.

It will develop in this sphere that, as we move along, the deterioration of the risk environment in political-military terms usually has a counterpart in financial relations after all, so there is, in some sense, a direct linkage between the kind of phenomenon that I would like to discuss this morning and the economic issues that are the principal topic of this conference.

In Minsky's financial analysis, the unit of observation is the firm. In this modification or extension to international relations, the unit is the nation-state. In this respect, what I'm offering is essentially the rational actor paradigm of standard realist international relations theory, but we're not necessarily wedded to that particular construction. In a model of bureaucracy or politics, risky behavior for the conglomerate entity can emerge from stable environments in consequence of the actions of individual players, who become emboldened to test the limits traditionally placed on their behavior by convention, ethics, regulation, or law. This is similar to the way in which firms can be endangered by risky behavior emanating from the chief executive officer—an idea that is famously known as control fraud—and from the ranks of management through a failure of labor management relations or, for that matter, from entrusting financial risk management to those who are marketing statistical risk management models.

Just as all firms do not possess the same relationship to the market, nation-states do not enjoy symmetric relations within a global system. Rather, international relations exhibit an intricate, dynamic hierarchical structure. The central position is typically occupied by a dominant player, a hegemon, which is a preeminent power within a given sphere of influence.

A second tier is composed of allies, countries that benefit from the established system but do not control it, and whose economic and technological development is nevertheless high enough to put them in a position from which they may eventually move into control should the hegemon falter.

A third tier is composed of peripheral countries—the exploited—which provide commodities, labor, human capital, and export markets to the central powers of the system. In former times, those were usually colonies; today, they may still be governed, directly or indirectly, by agents of the hegemonic powers. Their sovereignty and their access to credit remain limited, and their currencies typically are soft.

There may be several such systems in the world at any given time.

The degree of influence that a nation-state has varies according to its status, and the status of a nation-state determines the share of benefits that it receives from the system. In international relations, as in economics, status (like market power) only determines the distribution of profits, not the total income or system welfare. That depends upon collective behavior.

What I want to focus on here is the behavior of countries that belong to the first two tiers of the system; that is to say, the dominant player and its allies.

Within each system, each member faces the tradeoff between self-interest and collective interest, between actions limited to increasing its power at others' expense and actions aimed at improving the collective welfare. Total welfare depends upon progressive development, which requires peace, good governance, and good order, at least between the hegemon and its allies. Violence toward the periphery

or toward other hegemonic systems is a separate matter; both the hegemon and its allies can benefit from that under certain conditions, but it's risky.

Firms in a modern financial economy gain market power initially by production of something for sale on an exclusive or semiexclusive basis. Firms go on to exercise power, however, not only through price markups but also through portfolio transactions, through borrowing and lending in the capital markets. In this way, they consolidate power by acquiring and eliminating rivals, among other things. But generally, as Papadimitriou and Wray pointed out in 1999,<sup>1</sup> they cannot obtain finance, and therefore even their ability to produce is limited, unless they have market power in the first place.

In the analogy to the international system, exclusive or semiexclusive control over key production processes typifies the dominant players, and this is necessarily connected to a privileged financial position. A country cannot develop effective military capability unless it holds significant technical advantages, and so it cannot finance the development and maintenance of state power unless those advantages are recognized and supported by financial markets; hence the eternal importance of bankers to princes.

For this reason, even a dominant player faces limits on its power. It depends for the continuity of its status on the forbearance of its allies and, to a degree, also that of the peripheral countries within its sphere. It must borrow from its allies in order to sustain its technical and military advantages over them; and as for the peripheral countries, their resistance and resentment cannot be so great as to force the hegemon into an exhausting struggle to maintain its position.

To bring this into the framework that was established for us by Minsky, in the international system economic growth and technological development play the role of cash flow-generating activities. They're the bread and butter of a power position—how competitive you are, how dominant you are. Military power, on the other hand, and the financial relations that support it play the role of portfolio transactions. They are devices to project power beyond what can be justified by economic and technical supremacy alone. The game of maximizing status can be played by both through either channel, and the great powers invariably play the game by combining the two.

For the firm, there will always be uncertainty about the match between cash flow-generating activities and the portfolio transactions. The former are based on assumptions about future market conditions; the latter are given by contract and are therefore known, at least within the contingencies specified in the contract.

Thus, the first question facing the firm is whether the underlying basis of its market power, its superior product at a price not challenged by effective competition, will continue to generate profits sufficient to cover financial commitments—and that's always an uncertain situation.

In the case of the nation-state, the costs of peacetime military power are in the public budget and therefore reasonably known. The financial obligations of the state, at least throughout most of modern history, are also disciplined by the limitations imposed by the financial markets, by how much access to the credit markets the state will actually have. Yet the technological superiority, and therefore the actual military superiority in the contingency of conflict, is always uncertain, because it depends upon the prospects of future competition—that is, on a matchup in the marketplace or on the battlefield that has not yet occurred, that may never occur, and whose outcome, if it does occur, cannot be entirely predicted. Great powers are always riven by anxiety about their actual and potential rivals, of whom their knowledge of conduct and performance is, as Minsky wrote in a different context, “based on conjectures, and therefore uncertain by nature.”<sup>2</sup>

Like firms in a market economy, countries seeking to project and defend their power must innovate, experiment, and improvise. The competition is always in mind. Objects in the mirror are often closer than they appear. Like the firms, countries—and again, to quote Papadimitriou and Wray—“operate on the basis of trial and error; if a behavior is rewarded, it will be repeated. Thus, stable periods naturally lead to optimism, to booms and to increasing fragility.”<sup>3</sup>

For Minsky, financial instability is linked to the relative importance of the different sources of revenue. Three basic profiles describe the reliance of firms on different types of income: the hedge, the speculative, and the Ponzi profile. Firms engaging in hedge finance mainly rely on income or cash flow to fill their obligations, whereas speculative and Ponzi schemes rely increasingly on the portfolio transactions. The former may face ordinary market uncertainties—that is, any crisis that they may face is a crisis of ordinary competitive performance. This is not so for those engaging in speculative finance. Firms in a speculative position have taken on financial obligations for which the expected cash flow is not expected to be fully sufficient. Therefore, they must not only maintain their cash flow but also refinance their positions periodically. A speculative position may be refinanced if market conditions do not change, but it is vulnerable to unforeseen changes. If a firm in such a position cannot successfully refinance, the speculative position may simply collapse. But it may also become—and here’s the third stage—a Ponzi position, inherently unsustainable and prone to collapse once its nature is recognized by the world.

Countries contesting for economic and technological advantage in a stable global environment are the analogs of hedge players. They’re relying on future cash flow to assure prosperity and progress to meet their commitments. Their financial capacity reflects an acknowledgment of economic and technological power, and they are financed because that power is expected to be sustained. The uncertainties they face are those of their own material capacities in competitive conditions.

A speculative profile, on the other hand, would occur when a hegemonic power uses its power, particularly the threat of military action, to project influence in a way that is hostile or challenging to another power, or when an allied country decides to challenge the hegemon within its own system. The problem is that the position provokes the reaction of another strong player and therefore comes under challenge, and the speculative position must be refinanced periodically under conditions whose character cannot be known in advance. The position may be tenable, or it may not be. If the position is untenable, the speculative player has two options: he can fold his hands, or he can double down and hope for the best.

As in finance, the transition from a speculative to a Ponzi profile is not fully under a country’s control. It depends on whether the speculative position can be refinanced, on whether a provocative confrontation is resolved without escalation in the form of an arms race or an outbreak of violence, either of which may have very dire financial implications; and on whether those implications can be handled by the bankers. Once open conflict starts, it generally requires more economic resources than were provided for in the advance planning, and a process of accelerated depletion gets under way. It’s absolutely characteristic of war: it’s always much more costly than people thought in advance. As what was initially considered a limited engagement transforms into a military quagmire or explodes into total war, a vicious cycle takes place that often ends with the collapse of the regime.

To say a word about how national positions are affected by the system as a whole and vice versa, a country in a hedge position maintains its position largely through the development of economic and

political influence. It relies on mechanisms of collective security. If it's an ally, it doesn't challenge its leadership; but if it's the hegemon itself, it doesn't overreach. Abuse of the periphery may be routine from both parties, but as a rule, the periphery is so weak that it cannot effectively fight back; consequently, the benefits of such abuse exceed the costs. The shift from a hedge to a speculative profile is typically the product of the success of the system. A hegemon at the peak of a well-functioning alliance and a dependent periphery well under control may decide to challenge other hegemonic powers. In the extreme case of a globally preeminent hegemon, it may simply decide that the existence of other spheres of influence, of autonomous powers, is intolerable. Needless to say, success against one system is likely to breed extreme confidence that the others are equally open to attack.

An allied state, however, may become weary of supporting the system. It may come to feel that the security provided by membership in the system is not worth the cost of the tribute required to sustain it. While direct conflict between the hegemon and its allied powers is rare, the challenge can take a more subtle form. Specifically, it can consist of denying easy credit and therefore undermining the hegemon's chance of prevailing in a contest with third parties.

Once in the speculative position, countries are not only exposed to the commercial, technological, economic, and political risks that hedge countries are exposed to; but they also become vulnerable on military and financial fronts. Bad things can then happen and often do. When speculative positions must be financed, the terms on which they are refinanced may be unsustainable in the sense of being incompatible with national success over time. If you can, it's still better to refinance and to put off the day of reckoning than to admit defeat—or it seems that way to those in control. And so, as with the firm, once a speculative position has been taken, the shift to a Ponzi position is largely outside national control. When it happens, it renders the national position, and that of the system as a whole, critically unstable. Eventual collapse is inevitable.

Thus, for countries as for firms, the movement to what we'll call the generalized Minsky moment comes in two phases. The shift toward speculative positions or fragility—and again, I'm quoting from Papadimitriou and Wray—occurs intentionally and more or less inevitably because of the way in which expectations are affected by success, while the shift from a speculative toward a Ponzi scheme is mainly unintentional. And once a Ponzi position exists, there's no need for a shock to generate a crisis. As Éric Tymoigne explained in his paper on the Minskyan system, “The immediate cause of a financial crisis does not matter. The forces at work that led to the crisis started to operate a long time before the factors triggering the occurrence of the crisis.”<sup>4</sup>

So: stability is destabilizing. If that were all there were to it, one might expect, as a logical outcome, a constant stream of wars between hegemonic powers. Similarly, one might expect, in the case of a financial system, a constant stream of crises. Then the question one has to ask is, Why don't they occur more frequently than they do? As a matter of history, these things don't happen in a constant stream. Confrontation, crisis, collapse—all do happen with bruising frequency over a long historical record. But hedge positions in finance, as in international security, have been maintained for a long time. Notably, that's true in living memory.

But it's also true over a longer stretch of history. From the end of the Napoleonic Wars till the outbreak of the First World War, Europe enjoyed comparative peace, interrupted more frequently by revolution than by war. Wars were, of course, continuous, but they occurred in remote regions—the grab for Africa, the rebellions in India, the Opium Wars in China, the war in the Crimea, the war between

Japan and Russia at the start of the 20th century, the Civil War in the United States. Wars on European soil were rare, with the notable exception of the Russian victory over France in 1870. Why is that?

We believe that the broad answer lies in the development of the national army following the French Revolution, and the consolidation of Germany and Italy into nation-states. In the Industrial Revolution, with the rise of the railroad and the possibility of mass mobilization, the national army was a new and quite terrifying development. It greatly raised the uncertainty associated with the prospect of military conflict close to home, and so induced hedging behavior. Competition focused on obtaining maximum economic and demographic supremacy alongside the largest possible dependent empire.

Three elements were key in the process of colonization in the 19th century. The first was the overall supremacy of the United Kingdom, especially on the high seas, which promoted caution amongst everyone else. The second was the use of military means to establish free trade—the free movement of goods, people, and money that developed under British hegemony between 1870 and 1913 and was made possible in large part by military might rather than by market forces. The third was the development of advanced technologies and weaponry, giving European countries a decisive edge over everybody else, which made imperial expansion extremely cheap. Empires developed, but the United Kingdom was preeminent, with France, Germany, Austria, and Hungary distinctly second-class.

By the early 20th century, the project of empire building had reached geographic limits, and for each major European power, the successes of the late 19th century bred a surpassing confidence in their capacities. What remained was to get in one another's way, to tread on one another's toes, while engaging in a broad arms race. Hedge behavior became speculative. Crises between competing empires started to erupt, revealing, among other things, the weakness of the Russians in 1905, the diplomatic isolation of the Germans at Tangier a little later on. The Kaiser was emboldened by the first, enraged by the second. Both situations moved him along the path of further speculative bets, and it did not take much, in August 1914, for the speculative position to be transformed into a Ponzi profile by the assassination of Archduke Ferdinand in Sarajevo and the subsequent mobilizations and outbreak of war.

Once the war started, there was no going back, nothing to do but to double down repeatedly until, by 1918, all the major European powers were bled dry and exhausted. And in the interwar period, the cycle shortened, in part because efforts to restore a stable hedge position were crippled from the beginning by the Carthaginian peace imposed at Versailles and the defective design of the League of Nations. Any prospect for a collaborative path toward economic development collapsed, and Germany launched on its well-known strategy of speculative confrontation with Britain and France.

The historian Adam Tooze has written a very interesting book, published last year, on the economic history of the Second World War. Called *The Wages of Destruction*, it emphasizes that German strategy, including the genocide, was substantially driven by the lust for land. Without *Lebensraum* and the agricultural terrain it would bring into German hands, the Nazi leadership believed that Germany would be permanently reduced to the status of a second-rate power. The genocide that they envisaged went far beyond the Jews and the Poles, and would eventually have included the entire population of the Western Soviet Union.

For Germany, therefore, the hedge behavior compatible with sustained peace was never an option. What Hitler did was to gamble, and initially—in Austria, Czechoslovakia, Poland, Belgium, Holland, and France—his speculations all paid off very well. In each case, aggression provided a reward vastly greater than what it cost, and this led, in classic Minskyan fashion, to overconfidence and the willingness to increase the bet, until, in May 1941, Germany challenged the Soviet Union.

From that point forward, Germany's industrial and military capacities were limited quite severely by its finances. To pay for critical supplies from neutrals such as Sweden and Switzerland, equally critical materials such as coal and steel had to be exported. Populations that had been overrun had to be looted, starved, even murdered, which was costly and inefficient. Petroleum could not be bought, it had to be seized. Labor could not be paid, so slaves were imported and worked to death. Tooze makes clear in particular—and this is contrary to the conclusions drawn right after the war by my father, John Kenneth Galbraith, and his team at the United States Strategic Bombing Survey (USSBS)—that the armaments miracle which brought German war production to a peak at the end of 1944, in defiance of the bombing, would have ended quite soon in any event. Japan's financial situation was, if anything, more extreme. Japanese policies in Manchuria and the occupied regions of the Pacific Basin reflected this.

Both systems were unsustainable, and if the war had gone on long enough, both countries would have collapsed even if they had not been overrun. Actually, the USSBS said as much explicitly in its conclusions about Japan.

In the cases of Britain and the Soviet Union, the situation was quite different, because those countries were bound to each other and to the United States and the larger world by a functioning financial network. This permitted the recognition of the Ponzi character of the British commitment in particular to be deferred until after the war was over. Britain borrowed heavily from the United States, but also from its empire, including India. Its debts to the latter could be settled in part by the granting of independence after the war. But the result, in many ways, was effectively quite the same. Britain no less than Germany was reduced to second-tier status by the consequences—in Britain's case, financial rather than material—of World War II. The Soviet Union escaped that fate for 40 years by hanging on to the empire it had won on the ground. Only the United States was thriving; now the main power of the system, it would have the luxury of writing new rules for the period to follow.

These were, by and large, enlightened rules. The end result was the construction of a world financial and political system that enforced hedging behavior on the major players for about 25 years. Each aspect of the system—the U.N. Security Council, NATO, the International Monetary Fund, the World Bank—and each major program, from the Marshall Plan to the development of the European Economic Community, worked on the basis of a degree of mutual obligation and restraint. This was buttressed in relations between the great powers by the doctrines of deterrence and containment, by the deterrent power of the nuclear bomb. This period thus made possible the larger accomplishment of a rapid economic recovery, of sustained development—albeit based, as we now realize, on certain environmentally unsustainable practices.

For Minsky, the apparent stability of the postwar economy was founded on the combined impact of strong regulation enforced by strong institutions, and the policies of Big Banks and Big Government effectively implemented from the onset of the New Deal. The stabilizing framework precluded excessive risk-taking and blocked the movement of financial players from hedge to speculative positions. Those movements that did occur could be managed. If the overall system was stable, the instability of small elements within it could be largely offset when difficulties arose.

And the same was true for the international political system. Yet, as Minsky's thesis would predict, it did not last. The Cold War fostered hedging behavior, but it also pushed outbreaks of actual violence away from the center and into the peripheral countries. The periphery was therefore wracked by violence, and some of that violence placed the two world systems, those of the two dominant players, in conflict, initiating the step-up process from hedge to speculative positions.

This was particularly true in Vietnam, where the United States, in response to a revolutionary initiative that it perceived to be speculative behavior on the part of Communist China, moved to a speculative position of its own in Vietnam in the mid-1960s. Ultimately, that was a war the United States lost; but that came later, after *détente* had been reached with China, and the military loss was not of strategic importance. What bothered the United States more in this period was the unsupportive financial behavior of its allies. Well before the defeat, the stalemate in Vietnam led to the unraveling of the favored position of the States at the heart of the Bretton Woods system, forcing the country off the gold-exchange standard in 1971 and toward the adoption of flexible exchange rates in 1973.

It has often been argued among economists that a more restrictive fiscal policy in the late 1960s would have prevented that and preserved the old system. But Robert Eisner, in a paper dating to 1968, very persuasively refuted that view. Given the unwillingness of the world to write blank checks, the only thing that could have saved the world system, as Eisner wrote, was not to get involved in the war in the first place.

The United States eventually recovered from those financial troubles, but why, how? The basic answer is that it launched another major financial aggression against the Third World, this time in the form of the debt crises that were precipitated by the tight monetary policies of the early 1980s. The consequence of that was basically to restore the dollar to its unchallenged position as the reserve currency for the world, laying the basis for an American-centered world economic expansion to resume into the 1990s. This was substantially more efficient as a form of aggression than military adventurism.

Meanwhile, because for the time being the other system was still in existence, much of the world continued to feel a need to finance the military superiority of the United States. And success emboldened, as it always does. The economic decline of the Soviet empire made challenges to its position in Afghanistan, or the threat of Star Wars, highly effective in relation to their cost. China, in addition to Japan, effectively emerged as an ally, willing to support the U.S. financial position in return for secure access to U.S. markets, as well as secure access to the raw materials and food of the Western hemisphere and to the energy of the Middle East in a system that was being patrolled by the American military.

Then the Cold War came to an end. That was expected by many to augur the end of history, but Minskyan logic obviously dictated a different result. The end of the Cold War brought the prevailing structures of deterrence partially to an end, while fostering a sense of triumphalism in the surviving hegemonic power—the United States. It therefore encouraged elements within the United States to enter once again what could be identified as the speculative phase of the cycle. As Madeleine Albright famously remarked to Colin Powell, “What’s the point of having this superb military you’re always talking about if we can’t use it?”

With the First Gulf War, the first President Bush remarked that the United States had “kicked the Vietnam syndrome once and for all,” greatly encouraging the architects of military power to brave its use. Throughout the 1990s, while the United States remained broadly cautious, largely multilateral, and restrained in the ways military power was deployed, the ultimate successes of interventions in Bosnia and Kosovo reinforced the view that U.S. military power could not be effectively challenged. Increasing confidence would lead to the taking of new speculative positions immediately following September 11, 2001. And then there would be a seemingly easy, rapid victory in Afghanistan, which would increase the boldness with which policymakers were willing to approach other problems and other goals and objectives.

But then came Iraq. The Iraq War has obviously confronted American leadership, for the first time since Vietnam, with a speculative bet gone bad. A study by the National Defense University released yesterday describes the Iraq War as “a major debacle.” The idea was that war would be brief, successful, and cost practically nothing. Had that been the case, then, of course the architects of the war would have gone on to bigger things. They miscalculated. Why?

The principle reason, I think, now appears reasonably clear: Iraq was not, as the planners supposed, another isolated peripheral country like any other. It was rather well within the geopolitical reach of at least one neighboring power that remained outside the U.S. sphere of control, a country that, because of its relatively minor place on the world stage, was not clearly recognized as an important competing power. And that, of course, is Iran.

Iran has proved very capable of projecting its own power into the Iraqi vacuum, and we now have a government in Iraq, supported by us militarily, that is more closely allied to Teheran than it is to us. American leaders thought they were knocking over a minor adversary, and ended up greatly strengthening a much more significant one. After five years, they find themselves with no path to victory, with declining credit and no plausible way consistent with their own goals and reputations to engineer a return to the hedge system of mutual stabilization. To return to a hedge system from an overextended imperial one is possible, but it would require leaving Iran in charge in Iraq.

Minskyan logic suggests that at some point the only way to refinance the power debts of the Iraqi debacle will be to incur new ones—for instance, by taking on the rival power directly. Unlike in Vietnam, the U.S. military cannot actually be defeated in Iraq, but again, that is not the issue. Rather, the American position depends on the willingness of the world to finance it, and this, as we see going back through the entire history of the 20th century, emerges as the essential issue. That willingness, in turn, depends upon three conditions.

First, it depends on a continuing conviction by some countries, our ostensible allies but also China—not a country that can be supposed to have a great reserve of affection for the United States—that the costs of failing to support the American global position outweigh the costs of maintaining that support.

Second, it depends upon a belief by other countries in the periphery and amongst rival powers that American power cannot be successfully defied. The Iraqis, obviously, have already gravely undermined both propositions. An attack on Iran, if one were coming, would without doubt undermine them even more, particularly if it escalated and endangered the access of Europe, China, and Japan to the oil of the Persian Gulf.

The third condition is that the financial system of the United States remains second to none as a safe haven for the maintenance of liquidity and investment value. And there, of course, we have another problem, about which you have been talking for a day and on which we will all be spending another day today. The subprime crisis, the freeze-up of interbank borrowing, and the generally skittish and un reassuring behavior of the U.S. financial authorities all work to undermine this third condition.

On another occasion, I described the position of America’s creditors as being those of a group of sleepy, perhaps rather overweight patrons in an uncrowded theater, sitting in the front row. They smell smoke. They get up and look around, but frankly, they can’t be bothered, and they settle back in to watch the show. Warren Mosler, in correspondence the other day, took up the same metaphor and said what’s actually happened is that Henry Paulson and Ben Bernanke and George Bush and others have come out on the stage and are yelling *FIRE!* at the top of their voices. And this, finally, is getting the



patrons to rush to the exits. It's absolutely incomprehensible behavior, but there it is. And that, perhaps more than anything else, is the thread by which the financial fortunes of the United States as a whole, the position of the international dollar, now hangs.

The situation thus poses a question: at what point does a speculative bet gone bad turn into a Ponzi profile that cannot be redeemed? That question, for the moment, remains unresolved, just as the value of the international dollar hangs in the balance. It's an uncomfortable position, particularly when one recognizes that the potential for doubling down, for raising the speculative bet and increasing the level of risk, remains very much alive.

Thank you very much.

*Further comments from the Q&A follow:*

If this were simply a question of the direct cost of the war, it wouldn't be a problem. We can afford to keep 130,000 soldiers on patrol duty in Iraq till the end of time, or for the 100 years that John McCain is apparently comfortable with. It's nasty, but it's not beyond what we can afford.

The problem is that this is in the context of a series of massive portfolio bets, which put the stability of the system on the plane of capital market transactions rather than cash-flow transactions. Capital market transactions hang by very narrow judgments, and they are discontinuous. There are large situations in which there is no price at which the asset will be bought; this is why stop-loss orders don't work.

So that, I think, is the situation that we have not taken on board. There's a disconnect in policy-making circles between these financial issues and the question of the U.S. role in the security system. That gap ought to be closed, and people with no sense of what the financial position of the country is or how fragile it may be ought not to be in the position of setting security policy.

In 1939, at the outset of the war, the British Treasury warned the Cabinet that, without decisive American support, "the prospects for a long war are becoming exceedingly grim." They understood very clearly that this was a war that was going to be fought on two fronts—a military front in Europe, and a financial front in the United States. And, of course, the third volume of Robert Skidelsky's biography of Keynes is subtitled "Fighting for Britain, 1937–1946." But fighting against whom? Keynes wasn't in any trenches or any tanks; he was in Washington for a lot of that time. He was fighting to secure Britain's position in the financial system—against us.

The constraints under which Britain operated were much more rigorous, bankerly constraints, apparently, than those faced by the United States; after all, we're the ones printing the world's reserve currency. So long as the Chinese and the Japanese, the Saudis and others, were quite indifferent about how much they were willing to hold, the constraints did not bind. But it's precisely because this is all voluntary and depends upon their willingness to support the U.S. position, and whether, in the face of what may be changing conditions in other countries, this situation will continue.

Now, what's happening in China? I firmly expect that a watershed event is happening in China—namely, the Olympics—and that all of the construction that has been ongoing in Beijing was planned with a view to having it completed by this summer, and that the inflow of capital financing that boom is going to be affected by a falloff in building activity. In fact, that's already clearly happening in Chinese real estate markets. Is this going to affect capital flows in and out of China, and therefore the position of the Chinese with respect to their reserve holdings? It could very well. So the situation can change quickly, and then we become reliant on the indulgence of a lot of different players, including the Europeans.

I don't think the current stalemate with Iran is in imminent danger of collapsing into military conflict on its own, because it's not in the interests of any player to make it collapse. The problem is that a stalemate is not a politically acceptable outcome in the United States. If it's accompanied by a falling dollar, rising commodity prices, particularly rising oil prices, and a general sense of stagflation—which is entirely possible, not this year, but next year—it becomes even more difficult.

The question then becomes, Do we see an attempt to reestablish a hedge position, which means transforming U.S. policy toward Iran and negotiating with them—you make peace with your enemies, not with your friends—or are we going to see an action that would provoke the Iranians, resulting in an escalation of violence?

There are certainly a number of reputable and well-informed people who fear the second course of action might occur—an attack, on some area that Iran controls or perhaps on some part of Iran itself, that would engender a retaliation. These things happen in global conflicts. It's quite possible that we could see what I would refer to as a doubling down and an explosion of violence directly between the United States and Iran. And that, I think, would be putting every bet on the table from a financial point of view.

The nuclear question is also very important. We do have the National Intelligence Estimate. All of our intelligence agencies believe—and I believe that they believe accurately—that Iran suspended its weapons programs some years ago. The Israelis obviously reject that view. But the Israeli position is not necessarily motivated by a greater command over the facts of the situation; rather, it's motivated by a different interpretation of the Iranian regime's intentions. It's really the intentions, rather than any actual practice, that the Israelis find extremely threatening.

That is not a tenable basis for a confrontational foreign policy. We have to live in the world with lots of people who would do us harm if they could, who have bad intentions, who do not like this or that. That should not be a *casus belli*. Specific actions and imminent threats are another matter. There are, of course, decisions to be made about whether an imminent threat can be dealt with by deterrence, or whether it requires something more aggressive.

But we're not there, and nobody believes we will be there for some years. So the hope is to get back to a hedge position and to rely on effective diplomacy and effective deterrents, to permit the emergence of a stable balance on that question in the Persian Gulf.

*The author wishes to thank Daniel Munevar for his assistance in preparing this talk. The eventual paper will be coauthored.*

## Notes

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**ROBERT J. BARBERA**

*ITG*

**Has Greenspan's Conundrum Morphed into Bernanke's Calamity?**

**A Minsky/Wicksell Modified Taylor Rule**

*Paper coauthored by Charles L. Weise, Department of Economics, Gettysburg College*



H. L. Mencken once remarked that, “for every problem, there is a solution that is simple, neat, and wrong.” He could easily have been talking about economists’ pursuit of a one-size-fits-all rule to guide monetary policy. We all know the ideological motivation behind efforts to make monetary policy automatic. Free markets, mainstream economic theory insists, will get us where we need to go. Ergo, the less room for meddling by the central bank, the better. We also know why central bankers speak respectfully about rules. When they judge that policy needs to move in a politically unpopular direction, they can find some cover by claiming that the decision was ordained by a rule.

Paul Volcker, a giant among central bankers, brilliantly exploited this trick. When Volcker took over as chairman of the Federal Reserve (Fed) in 1979, he announced that money supply growth targets would dictate open-market operations. By declaring that the Fed was eschewing interest rate targets for money growth trajectories, Volcker could claim with a straight face that the ensuing spectacular rise for interest rates was an unfortunate burden, but one that he had no immediate way to remedy, given his need to adhere to his self-imposed money target straitjacket.

After the collapse of any recognizable linkage between money stock growth rates and growth rates for nominal economic trajectories, Stanford’s John Taylor came to the rescue. The Taylor Rule arrived in the early 1990s. Taken literally, it says that central bankers have a new way to put monetary policy on autopilot—the end of money stock targeting notwithstanding.

But as Mencken reminds us, life is never simple. The Taylor Rule has had a tough 10 years. Part of the problem is reflected in the wild swing in energy prices. Oil prices fell to below \$10 per barrel in mid-1998; today, they are more than 10 times that price, with near contracts for crude oil trading hands at prices well above \$100 per barrel. That put changes in the Consumer Price Index (CPI) into volatile territory. Taylor Rule calculations called for volatile swings for Fed funds despite relative quiescence in underlying price pressures. Fed policymakers, in response, elevated the importance of core inflation. But a Taylor Rule Fed funds trajectory using the core CPI also does a poor job of catching actual swings in the overnight rate. In particular, a core CPI-generated Taylor Rule fails to anticipate late-1990s tightening. It fails to predict aggressive Fed easing in 2001–02. And quite spectacularly, both the core CPI

Taylor Rule and a Taylor Rule using the more volatile headline CPI calculate that, over the past six months, Fed policymakers should have been raising interest rates.

Did Fed policymakers lose their minds? Admittedly, a group of people attending a conference in honor of Hyman Minsky is hardly a random sample from which to collect an opinion on monetary policy. Nonetheless, it is instructive to reflect upon the fact that most participants at this conference know full well why the funds rate has been falling rapidly. Most of us have come to believe that aggressive Fed easing is all but guaranteed when the “Minsky moment” arrives.

### **From “Rules Are for Fools” to “Our Rule Is Better Than Your Rule”**

The power of the Minsky moment to predict Fed policy invites a simple question: can we redefine the Taylor Rule in a fashion that does a better job of tracking the funds rate over the past 10 years? After all, it is easy to scoff at one-line equations that purport to capture all the essential information needed to divine monetary policy moves. But in the current climate of retrospective thinking about the Alan Greenspan years, reconstructing the Taylor Rule, imbuing it with Minsky-like insights, could well prove instructive. Thus, as a vehicle for retrospective analysis, not as a guide for future policy, we offer up the Minsky/Wicksell Modified Taylor Rule (MWM Taylor Rule). This equation, a reworking of Taylor’s effort, does a much better job of explaining the movements in the Fed funds rate over the past 10 years. And it does so, mostly, by including a term in the equation for Minsky moments.

But the equation delivers more than that. It is our contention that the MWM Taylor Rule reveals that U.S. monetary policy, for at least a decade, has been clearly schizophrenic. Once we remind ourselves of Fed policymakers’ justification for responding as they do during Minsky moments, we lay bare the Fed’s conflicted stance toward financial markets. Simply put, our equation confirms what many commentators have noted, that the Fed since 1998 has responded to flights of anguish while ignoring flights of fancy. And part of the wreckage of the moment can be laid at the doorstep of that unambiguous inconsistency, and the moral hazard that it helped to create.

What did we do to the Taylor Rule to make it confess? We made two adjustments, one quite palatable to mainstream economic thinking, the other, controversial.

### **From the Number “2” to a Wicksellian Neutral Real Short Rate**

Taylor’s initial equation included a term for the neutral real short-term interest rate. In one of the grandest economic generalizations imaginable, Taylor embraced one value for this economic variable. The neutral real short rate, he decided, was 2:

$$TR = \text{YOY (CPI)} + 0.5 * (\text{YOY (CPI)} - 2) + 0.5 * (5.0 - \text{Jobless Rate}) + 2$$

How does 2 stand up to the past 100 years of U.S. economic history? It has largely been honored in the breach. Attitudes about long-term trajectories for economic growth, long-term real return opportunities for investors and regulating regimes clearly change over time. In response, the average real short rate has changed, more times than not, from economic cycle to economic cycle.

With the advent of Treasury Inflation-Protected Securities (TIPS) bonds, we now have the ability to extract changing market opinion about long-term real return opportunities. We can look at the yield on 10-year TIPS, but we need to remind ourselves that if we believe monetary policy matters, we must

expect that it operates via financial markets. And that, in turn, means that the yield on 10-year TIPS is influenced by the Fed-determined overnight interest rate. Taking a page out of the Fed's playbook, we infer the five-year forward yield from the five-year real yield, by subtracting the five-year TIPS yield from the 10-year TIPS yield. What remains, we have labeled  $W$ , the Wicksellian neutral risk-free real long-term rate. We then allow for the fact that the yield curve, historically, exhibits a positive slope. We posit that the neutral real short rate, at any moment, equals  $W - 0.6$  percent:

$$TR = YOY(\text{Core CPI}) + 0.5 * (YOY(\text{Core CPI}) - 2) + 0.5 * (5.0 - \text{Jobless Rate}) + (W - 0.6) - 2 * (\text{Spread} - 1.9)$$

What does invoking Wicksell and the natural rate notion afford us? Replay the late-1990s Brave New World fantasia. Alan Greenspan and other members of the Federal Open Market Committee noted that the boom in technology investment had lifted notions of sustainable real growth, real investment opportunities, and equilibrium real risk-free long rates. Accordingly, they went on, the neutral-risk free rate has likely moved higher. By replacing the number 2 with  $W - 0.6$ , we have a market-driven measure of the neutral real short rate. A core CPI Taylor Rule with this adjustment much more closely tracks the tightening regime that unfolded in 1999–2000.

### **What's Missing? Minsky Insights, Compliments of Risky/Risk-Free Spreads**

What remains to be explained, of course, are the moves to ease in 1998, 2001–02, and the present period. What prompted the Federal Reserve to ease in each of these cases, in conflict with standard Taylor Rule calculations? Panic in asset markets led Fed officials to conclude that risks to the financial system were large and growing.

As a simple proxy for the state of fear in the system, we enter our Minsky term: *credit spreads*. We compare the yields of Treasury and BAA-rated corporate bond yields. We label 190 basis points a neutral credit spread, with deviations from the neutral spread justifying changes in the target funds rate.

How does our Minsky/Wicksell Modified Taylor Rule perform? The revised formula actually does pretty well. It captures the tightening in 1999–2000, compliments of the Wicksell term. It anticipates ease in 1998 and big ease, in 2001–02 and at present, thanks to the Minsky term.

It is at this point in our story that we think it becomes important to tie some simple macro theory to swings in the Wicksell and Minsky terms. To that end, we need to explicitly, if somewhat simplistically, describe the Fed's money transmission mechanism. We start by accepting the New Keynesian notion that the Fed sets the nominal short rate with an eye toward influencing the risky real long rate. The risky real long rate, we posit, is a function of  $W$ , the Wicksellian neutral risk-free long rate;  $S$ , the risky risk-free spread; and  $f$ , the real Fed funds rate:

$$R = f(f, W, S)$$

We can now revisit that old chestnut, the IS/LM diagram, replacing the LM (money market) curve with a TM (transmission mechanism) curve. The TM curve is an explicit formula that relates the real Fed funds rate to the risky real long rate. The IS (goods market) curve is standard, relating changes in investment to changing risky real long rates.

In 1999, much of the globe embraced the notion that we had entered a Brave New World (BNW)—a technology-driven boom economy. This Wicksellian event is reflected in a sharp outward shift in the IS curve and an upward shift in the TM curve. The IS curve shifts to the right, and the BNW offers up substantial new investment opportunities at a given interest rate. The TM curve shifts upward, and the equilibrium Wicksellian rate rises, a function of expanded investment opportunities and higher real growth rates. Again, this BNW technology shock is captured by our Taylor Rule equation....

What does this imply for the Fed? The Fed funds rate rises as the neutral real short rate climbs along with the Wicksellian neutral rate. Much to the delight of efficient-market theorists, the Fed does best by simply following the market's lead. Do what the TIPS yield tells you, in a Wicksell modified Taylor Rule, and you get to the right place.

Now, however, we need to explain the swoon for Fed funds, visible in 2001–02 and unfolding in the economy at present. We begin with the 2001–02 experience. When the BNW notion went bust, financial markets began to violently reprice. What happened to the market's notion of equilibrium real interest rates? Our imputed  $W$ —the Wicksellian neutral risk-free long rate—falls, reflecting newfound pessimism about investment opportunities. This drop for  $W$  can be interpreted as a shift left for the IS curve.

What about the TM curve? In a world in which central bankers had an easy life, the TM curve would shift down sharply, lowering the risky real long rate and signaling to the Fed that the funds rate needs to fall commensurately. But we live in no such place. Instead, we operate in a system where major disappointments at business cycle turning points simultaneously drive real return expectations *and* risk appetites sharply lower. As a consequence, the risky real rate rises even as the conventional wisdom comes to believe that investment opportunities have fallen precipitously. In other words, the TM curve shifts upward just as the IS curve has shifted to the left compliments of surging risky/risk-free spreads. And that, of course, sets the economy and the markets up for an adverse feedback loop that can end in catastrophe.

Except, of course, that since the 1930s, "It" (another Great Depression) hasn't. Why not? The answer, with all due respect to Mencken, is simple: the Fed understands its role as lender of last resort. It recognizes that the sharp widening of spreads implies a sharp shift leftward for the IS curve, and it knows that it needs to ease with abandon to counter sharp spread widening and to lower risky real rates.

### **From Macro Theory to Monetary Policy Critique**

We like the fact that our MWM Taylor Rule does a reasonable job of capturing the Fed's reactions during Minsky moments. But the depiction tells us more. Greenspan's commentary, in both 1998 and 2001 amounts to labeling market moves as driven by "unwarranted fears." That sounds to our ears like an act of heresy for someone who embraces the wisdom of markets. To take one's cue from market-implied neutral risk-free rates—a passive Wicksellian approach—is doomed to failure. At crucial moments like 1998, 2001–02, and 2007–08, the Fed needed to actively ease to counter systemwide risks in an increasingly bearish backdrop.

Which brings us back to Alan Greenspan and monetary policy over the past decade. In both words and actions, Greenspan, in moments of crisis, made it clear that he was willing to reject market assessments. Unwarranted fears were met by aggressive easing. How, then, do we square these actions with Greenspan's oft-articulated refusal to out think market judgments on the way up? Greenspan, with a straight face and no cigar smoke, insisted that the Fed had no tools available to judge whether markets were moving toward excesses.

Which brings us to our final look at the MWM Taylor Rule. By introducing spreads to the Taylor Rule, we see that Minsky insights both giveth and taketh away. In 1996 and 1997, supertight credit spreads implied higher Fed funds than the rates that were in place. Likewise, the pace of interest rate increase implied by the MWM rule in 2003–05 was much quicker than the actual rise for Fed funds.

What, then, does our MWM rule tell us? What most of us have known for some time, that the Greenspan-led Fed had an asymmetric attitude toward efficient markets. It applied no resistance to markets when they wanted to go up. It countermanded market forces when players' actions were pushing markets down. This asymmetry invited moral hazard. And some of today's woes in housing and for the overall economy are no doubt a consequence of this schizophrenia about rational markets.

Our penultimate conclusion? To suggest that strict adherence to our MWM Taylor Rule going forward will prevent future episodes of financial system excess is, of course, absurd. Minsky's greatest insight was appreciation of the paradox of Goldilocks. Benign real economy circumstances invite financial innovation, increased leverage, and, ultimately, financial instability. But the amplitudes of asset market boom-bust cycles may be tempered somewhat if Fed officials are willing to respond to financial system signals both on the way down and on the way up.

### **And Lastly: From Greenspan's Conundrum to Bernanke's Calamity?**

The MWM Taylor Rule suggests that the Greenspan/Bernanke plan to ever-so-slowly raise short-term interest rates was ill advised. The equilibrium risky real long rate, according to our simple equation, was well above the market rate in place for much of 2003–05. A more aggressive Fed tightening, we suspect, would have helped move the risky rate higher, sooner. To give Greenspan his due, he, too, recognized that long rates needed to be higher. He dubbed his frustration with their failure to climb a "conundrum." But labeling a problem is not the same as addressing the problem. Ben Bernanke, newly appointed chair of the Federal Reserve in 2006, replaced Greenspan's puzzlement with a theory: a global savings glut was weighing on real long-term interest rates. Defining a problem, although better than just labeling the problem, does nothing to address it. If rest-of-world savers were pushing U.S. long rates lower than domestic economic fundamentals justified, more aggressive Fed tightening could have been enacted to push the long rates up.

That is, of course, unless Bernanke meant to say that the U.S. economy is now a small open economy. Are U.S. long-term interest rates now determined by the globe? Is U.S. monetary policy now consigned to influencing only the U.S. dollar and powerless to move U.S. long rates?

It is easy to make the case that great U.S. inflation news, in 1998–02, and alarming inflationary developments, in 2005–08, reflect events that transpired in Asia in 1997–98.

Imagine, for a moment, that the United States is a small open economy. One can rapidly come to the conclusion that Greenspan's conundrum is now Bernanke's calamity. Greenspan lamented the fact that long rates failed to rise amid his stepwise lift for Fed funds. To date, Bernanke's sharp ease has had only limited success at lowering longer-date Treasury rates. And a fair amount of the fall in U.S. treasury yields has been stripped away over the past few months, as the U.S. dollar has fallen and the dollar price of commodities has climbed. Did Bernanke unwittingly define his own impotence when he awarded rest-of-world forces *primus inter pares* status concerning U.S. long rates?

Our take is that Bernanke will be spared such a fate. No one can deny the fact that U.S. capital markets are wide open and that U.S. long rates reflect U.S. and rest-of-world dynamics. So the United States

is, unequivocally, open. But the United States is big, not small. And therein, we suspect, is the difference that will give Bernanke's efforts purchase in the quarters to come. The U.S. recession that is now taking hold will be joined soon enough by deteriorating fundamentals in Europe and Japan. Booming emerging economies will come off the boil as many destinations for their exports slow sharply. Amid a world of more generalized economic retrenchment, interest rates will fall as central banks ease. And Bernanke will be spared the consequences of the flip side of his global savings glut explanation.



**MAURICE D. HINCHEY**

*U.S. House of Representatives*

**Weapons of Mass Economic Destruction**



Dimitri, thank you very much for the invitation to be here.

One of the things that I do in Washington—in fact, the thing that I enjoy the most—is trying to keep close watch on the set of economic circumstances that we confront. As Dimitri was saying, I have an opportunity to engage in hearings with the chairman of the Federal Reserve Board, now Ben Bernanke. He and I have been going back and forth on the issue of inflation for about a year, and as time has gone on, he's come a little bit closer to admitting that the economic situation we're confronting is serious.

As a member of the Financial Services Subcommittee of the Appropriations Committee, I also have the opportunity to engage with Treasury Secretary Henry Paulson. While questioning him at a hearing recently, the issue of weapons of mass destruction came up, and I recalled how all of that was lied about by the highest-ranking members in the Bush Administration beginning in 2002. So in that context I asked Secretary Paulson about the weapons of mass economic destruction that this administration has been forcing on the people of this country for almost eight years.

What are some of the issues that we are facing now, particularly with regard to an economic recession?

President Bush has tied for the worst jobs record of any American president since the Great Depression, with 3.4 million manufacturing jobs lost since 2001. The economy shed 80,000 jobs in March alone. The official unemployment rate is now 5.1 percent. But when you include those people who are no longer able to collect unemployment insurance because their 26 weeks have run out, and those who are struggling to find a full-time job, maybe working one or two days a week, the unemployment rate in the United States rises above 9 percent. So we've got a much more serious situation to confront than is being admitted to. As of yesterday, applications for unemployment benefits stood at 372,000, an increase of 17,000 over the previous week.

As many as two million Americans will see their mortgage rates increase over the next two years, with many of them losing their homes as a result of predatory lending practices. Tens of millions of homeowners could see the value of their home—their primary investment—drop in value.

Yesterday, oil prices reached a record high of \$115 a barrel. The national average price of a gallon of regular gas rose 1.9 cents overnight on Thursday, to a little over \$3.40. In New York, the average price is now up to \$3.51 per gallon.

In the United States, the total revolving debt, which includes mostly credit card debt and overdraft protection, was \$951.7 billion in February. That's an increase of \$10.3 billion over the course of just one month.

The Congressional Budget Office projects that by October, 28 million people will depend upon federal food assistance, up from 26.5 million last year. That would be the largest number of people depending on food stamps since this program was initiated in the 1960s.

Since 2000, the number of Americans without health insurance has increased by 8.6 million. A record 47 million Americans are currently without health insurance.

Americans are cutting back on their spending. Consumer spending in February was very close to flat—which is, of course, directly linked to the gross domestic product. GDP growth depends upon median-income spending.

It is estimated that the national debt will be \$10.3 trillion by the time President Bush leaves office.

Major U.S. companies are in crisis, and that, as we know, can impact on our entire economy. We know about the Bear Stearns fallout and what the potential consequences of that are, in spite of the way in which the Federal Reserve has stepped in.

Merrill Lynch this week reported a first-quarter loss of \$1.96 billion, resulting in the loss of 4,000 jobs, or roughly 6.3 percent of the company's workforce. JPMorgan Chase reported on Wednesday that its first-quarter profits fell by 50 percent.

I believe, and have believed for some time now, that we are in a recession. In my opinion, the only question that we need to answer is, How far and how deep is this recession going to go? How long will it last? To be honest, I do not think it would be a stretch to say that we may be on the verge of a new kind of depression, one of very serious economic impact that will be felt broadly, widely, all across the country. Many of the economic and financial circumstances we are facing are very similar, interestingly enough, to the circumstances that were faced back in 1929. The proliferation of weapons of mass economic destruction are in large part responsible for this recession.

Let me give you just a few examples of what these are:

First of all, the spending in Iraq, which is crowding out domestic investments that could create jobs, upgrade the economy, and address the internal problems we're facing, including environmental issues such as safeguarding the water supply;

The Bush tax cuts, which favor the wealthiest Americans;

The manipulation of hedge funds and the role they played in the collapse of Bear Stearns;

Oil speculators raising the price of oil; and

The deregulation of financial institutions that occurred with the passing of the Gramm-Leach-Bliley bill back in 1999.

What is the situation in Iraq? According to the Congressional Research Service (CRS), this administration is now spending \$10.3 billion a month on Iraq. But that doesn't include all of the things upon which we are spending money there. There are other, indirect costs, like lifetime health benefits for returning veterans. Some sources argue that we are spending roughly \$500,000 in Iraq every minute, minute after minute. As you know, Joseph Stiglitz and Linda J. Bilmes have both estimated that the invasion and subsequent occupation could end up costing us more than \$3 trillion—a far cry from the \$50 billion estimate that the people of this administration said it was likely to cost prior to the illicit invasion of Iraq in March 2003.

Just two months after the invasion began, Bush pushed for the first major wartime tax cuts in American history. Through 2008, the government has borrowed \$1.6 *trillion* to pay for those tax cuts.

In 2007, one-third of the total benefits of the tax cuts went to the top 1 percent of households (a group with annual incomes above \$450,000). But even more interesting, approximately 20 percent of

the total benefits went to less than one-third of that top 1 percent, to those households earning more than one million dollars a year. These households received an average tax cut 103 times larger than that of middle-income households.

Investment and economic growth since the 2001–03 tax cuts have been lower than average, which indicates that the tax cuts have not had positive economic effects. In fact, the opposite is true: the economic effects of those tax cuts have been seriously negative.

If the Bush tax cuts were made permanent, as the administration is pressing Congress to do, it would cost the federal government an additional \$3.4 trillion over the next decade. That's assuming that those funds would have to continue to be borrowed, which is highly likely. It would cost the government three times more, for example, than the amount necessary to close the largest estimated Social Security funding gap through 2075—and that figure is proposed by those who want to kill the Social Security system! It's pure speculation—it's not based upon anything concrete. If you have an economy that continues to grow, the cost of Social Security doesn't increase in any way near that number, and it's all perfectly manageable from a budgetary standpoint.

Right now, hedge funds do not have to register with the Securities and Exchange Commission. Yet these funds oversee more than \$1 trillion in assets, roughly 10 times the amount that they did a decade ago. Hedge funds account for between 20 and 30 percent of the trading volume in U.S. stocks, and at times even higher proportions in more specialized instruments such as convertible bonds and credit derivatives. That information, interestingly enough—and I would recommend you take a look at it—is in the 2007 CRS Report titled “Hedge Fund Failures.”

The increased use of hedge funds and their lack of regulation has been very troubling, and has already had a negative impact on our economy and, of course, on the markets. They have the potential to do much more damage as time goes on. It is estimated that between 7 and 10 percent of hedge funds fail each year for various reasons, including financial issues, operational issues, and fraud—blatant, outright fraud.

The most notable case recently of the failure of hedge funds was entangled, of course, in the fall of Bear Stearns. In June 2007—more than 10 months ago—Bear Stearns announced that two of its hedge funds were significantly invested in subprime mortgages, which were in trouble. The failure of these two funds resulted in the failure of the company and, ultimately, one of the biggest government-facilitated buyouts in American history. The federal government intervened in the Bear Stearns case because of the legitimate fear that the collapse of Bear Stearns would lead to a general collapse of the financial market. Not to simplify it too much, but hedge funds have the potential to bring down the entire financial market—and have almost done so.

It is imperative that hedge funds are regulated. There is legislation in Congress right now to regulate these funds, and it is my hope that it will be adopted and signed into law. The likelihood of that, of course, in the context of this particular Congress and this administration, is practically negative. It's not going to happen.

What about oil and speculators? Today, the cost of a barrel of oil, a gallon of heating oil, or a gallon of gasoline at the pump no longer accurately reflects actual consumer supply and demand for oil and gas. The demand for oil here in the United States, especially, is actually going down, because the price, obviously, continues to go up. In fact, last month, the Energy Information Administration, the statistical arm of the U.S. Department of Energy, reported that weakness in the U.S. economy had led to softening gasoline demand—to a *decrease* in the demand for gas.

Essentially, what is really affecting the price of oil is not so much the demand for the product but the demand for the commodities contracts for the product. With the recent downturn in equity markets, investors are increasingly turning to commodity investments, like oil. The soaring oil prices reflect big hedge funds and other large capital investors pouring billions of dollars into buying commodity contracts as a hedge against a falling dollar and, by doing so, significantly contributing to rising prices. The more these speculators buy, the higher the cost of the contracts, resulting in higher energy costs for the general public.

It is essential that the federal government, particularly the Commodity Futures Trading Commission (CFTC), begin monitoring some of these deals. I'm working with CFTC members concerned about a variety of these issues to make it unlawful for speculators to hedge their investments by buying billions of dollars of commodity contracts when they have no capacity whatsoever to actually receive or store a single barrel of oil.

The Gramm-Leach-Bliley bill, or the Financial Services Modernization Act, is a very interesting piece of legislation. This bill repealed the Glass-Steagall Act of 1933, which was put in place in response to the economic impacts of the Depression and was designed to keep investment banks separate from commercial banks. Investment and commercial banks began to blur the line between them intentionally on their own. They tried to bring themselves together for their own purposes because they realized that this was a faster, better way for them to make more money. As a result, the majority in Congress pushed through a bill, later signed by President Clinton, that would officially blur that line. I'm proud to tell you that I was one of only 86 House members who had the foresight to vote against that bill back in 1999.

This bill essentially enables both banks and investment firms to offer financial services. Some economists have concluded that the subprime mortgage crisis came about as a result of this legislation, and frankly, I agree with them. I think this has been perhaps the most significant single contributor to the economic circumstances we're confronting now. This bill allowed banks to not only sell mortgages but also to take these mortgages and incorporate them in risky investment schemes. This whole situation never could have happened if Glass-Steagall were still the law of the land. If we had just kept that in place, a lot of the problems we're facing today would never have come about.

What are the actions that we in Congress must take to provide a turnaround of this economy? The first thing that we should do is repeal the Bush tax cuts, but we're not going to be able to do that. However, we can ensure that those scheduled to expire at the end of this year do not continue, because they're going to be eliminated by the end of this year.

Get our military and our mercenaries out of Iraq as soon as possible.

Regulate hedge funds through the Securities and Exchange Commission.

Start regulating oil speculation, especially over-the-counter trading, and disallow investors from buying billions of paper commodity contracts without the ability to take or store the commodity they're buying. I'm supporting a bill that would require the federal government, particularly the CFTC, to begin monitoring these speculators' deals to prevent this kind of market manipulation. Many economists estimate that the price of crude oil could drop by as much as \$30 a barrel if over-the-counter markets were properly regulated. That means that you would see the price of gasoline at the pump cut back by as much as 85 cents per gallon.

We must begin to do the tough job of regulating this increasingly unregulated and speculative system that artificially increases the price of oil and affects every aspect of our economy.

We must deeply amend, or even repeal, the Gramm-Leach-Bliley Act. When that bill was passed, its initiators knew their house of cards would ultimately fall but that they would not have to pay for its collapse. That cost would be passed on to every citizen in the country. And so it has.

We must quickly pass a second economic stimulus package, one that includes, at a minimum, three things the Bush Administration ensured were left out of the first stimulus package. One is an increase in food stamp benefits. We see how many people are dependent upon food stamps and how hunger is increasing in our country, just as it's increasing dramatically in many other places around the world. There are at least 30 countries now experiencing severe economic depression that is causing increasing hunger in those countries. The nearest one to us is Haiti; another is North Korea.

We need investment in infrastructure projects that create good-paying jobs, broad projects that revitalize the internal economic security of our country. It's a very simple way to do that, and it's the most sensible thing to do. We have an obligation to ourselves to make sure that this country is economically secure. We have the money to do it; we've just got to be more careful and reasonable and intelligent about how we spend it.

And we need an extension and expansion of unemployment benefits. A lot of people are remaining unemployed for a lot longer than the maximum benefit period of 26 weeks.

Another important point is that the gross domestic product is moving in the wrong direction. Why? Because nearly 70 percent of GDP depends upon median-income consumer spending. As people get more and more in debt with their credit cards, they lose their homes. They find their incomes falling, perhaps because their employers now have to pay \$1,500 more per employee for health insurance, but for other reasons as well, based on the general decline of the economy. All of this is happening now and negatively impacting median-income households, and these are the households that drive GDP growth. And real GDP is falling.

There's one last thing that I would like to mention. One of the major issues that we are confronting, as a nation and globally, is energy. It's a very complex issue. Not only are we facing the huge cost of rapidly rising gasoline and heating oil prices; not only is that cost driving down the economy, particularly the way in which oil is being handled in commodities trades. Our dependence on oil is also creating a condition on this planet that, over time, is going to make it increasingly uninhabitable. Based on all the scientific evidence we now have, it is in fact a potential threat to our species' survival on this planet beyond the end of this century.

We have the ability to develop a new form of energy, to create a new industrial revolution. And it's not a new idea. Back in 1931, Thomas Edison, the U.S. inventor of the light bulb, said in conversation that he was very proud of what he had been able to do, but that the best source of energy is the sun. The sooner we realize that, and the sooner we're able to put it into effect, the sooner we're going to stop depending upon oil. And that dependence is going to have increasingly adverse effects.

We have the ability here in the United States to develop an alternative energy system, and to develop it in a way that it's going to make a contribution not just to us, but also to people around the world. But we've got to do it quickly, and intelligently.

We have set up a Solar Energy Consortium here in the Hudson Valley. We now have six universities involved with us. We've contracted with one manufacturer and are in consultation with others. I had a meeting just this past week in my office in D.C. with a number of people from corporations that are now wise to this issue and want to get involved.

One of the problems we face in Washington is the idea that we ought to be focused on fossil fuels. A lot of that has to do with the fact that farmers in the Dakotas and a few other places have stopped producing other crops and put their money into corn, and raised their incomes dramatically. But we know that doesn't work. It's just going to cause more problems. And it's one of the things contributing to the increase in food prices.

So this Congress, but even more so the next one, and the next president are going to face a whole series of very complex, amazingly important issues. We have the ability to reverse all of this. We have the ability to change the way in which the world functions, particularly the way in which we function. And we have the ability to regain the position that we enjoyed for so long, a position that enabled people around the world to look at us with respect and admiration, and to follow our leadership. We have the ability to recover that position, and we need the concentrated efforts of a smart Congress with a lot more strength than this one has, and a President of the United States who can be honest as well as intelligent when focusing on the needs of our country.

Thank you very much.

## Sessions

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### SESSION 1

#### *Historical Precedent and Solutions to the Mortgage Market Crisis*



Walker F. Todd, Alex J. Pollock, Thomas Ferguson, Jane D'Arista, and Dimitri B. Papadimitriou

**MODERATOR:**

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According to **JANE D'ARISTA**, we have lost one of the most important cushions in our financial system—reserves. She outlined a number of regulatory failures of the Federal Reserve (Fed): it made no effort to curtail leverage and speculation (e.g., the link between excess liquidity and debt-financed speculation), and it ignored asset bubbles (price inflation) and credit; it did not call attention to the problem of the over-the-counter markets created by banks; it overlooked the implications of deregulation and innovation, and changes in financial structure (e.g., the explosion in debt and the channeling of savings from banks to institutional investors); and it disregarded the implications of foreign capital inflows into the United States and their effect on the direction of policy. Further, it cannot act systemically because it is unable to suppress its

ideological commitments to unfettered markets. The Fed is the bully culprit of the financial crisis, D'Arista said, and it has not taken into account the impact of the shift from a bank-based to a market-based system, which is inherently procyclical, so its actions have tended to exacerbate cyclical behavior in financial markets. Monetary policy has lost the ability to stabilize financial markets and the economy.

D'Arista noted the large growth in household, financial, and total debt in the past 10 years. She also noted that, today, banks account for less than 24 percent of total credit, compared to 56 percent in 1976. She further noted that reserves (not capital) are a cushion and central to the issue because they have face value, are not subject to price changes, and are an invaluable cornerstone of the payment system.

In 1951, there was a very stable and safe bank-based system, whereby 11 percent of total bank deposits were covered by reserves. The percentage today is less than one-tenth of 1 percent. Face-valued assets have been replaced by risk-based capital requirements. The recent proposal by the Financial Stability Forum (G7 Conference) that banks increase capital against off-balance-sheet positions is counterproductive, D'Arista said, because there is no capital available from institutional investors, households, or businesses. The sources of capital are the sovereign wealth funds of foreign nations or, potentially, something patterned after the Great Depression-era Reconstruction Finance Corporation (RFC). The critical element is that we are facing a meltdown in financial-sector capital.

A predominantly market-based system relies on capital to cushion the effects of systemic disruptions. Falling prices erode capital and leverage accelerates that process. The major problem is that the Fed is not in a structural position to renew reserves and rebuild a cushion.

D'Arista proposed a new system of reserve management that assesses reserves against assets rather than deposits and applies reserve requirements to all segments of the financial sector. Her proposal would increase the Fed's ability to respond to credit contractions or expansions because it would be implemented by supplying or withdrawing interest-free liabilities in exchange for purchases or sales of assets on the balance sheet of the financial sector. We need to impose reserves on all financial institutions in the U.S. economy, D'Arista said, and make these institutions part of the Fed's monetary transmission mechanism. A supply of new liabilities at no cost emanating from the central bank would make it possible for individual institutions to write off or restructure the terms of loans or assets—a new and powerful monetary tool that would mitigate the destructive force of the current crisis for borrowers and lenders.

In the proposed system-wide reserve regime, using repurchase agreements as the principal operating tool would allow the Fed to exercise control over a much larger assortment of assets and strengthen its ability to halt runs, moderate crises, and curb excessive investment across the entire financial system. It would restore the Fed's ability to function as a systemic lender of last resort, as it did when banks were the dominant lenders in credit markets. The Fed could also respond more effectively to the excessive investment or disinvestment of foreign funds in U.S. asset markets.

The advantages of this regime are that it rebuilds a face-value reserve cushion, restores a faltering payment system, mitigates sales of assets, and includes an automatic stabilizer (e.g., price changes would be moderate). It would offset the liquidity trap that is built into the existing reserve-assessment system for banks because institutions with free liabilities could write off loans without jeopardizing their own survival (i.e., they would have access to a renewable liability).



**THOMAS FERGUSON** compared the politics of finance in the New Deal era and in the present. He said he expected the issue of single-payer insurance for people rather than for banks and primary security dealers to be a topic of the presidential campaign, and was surprised to discover the indifference (e.g., that of Congressman Barney Frank, chairman of the House Financial Services Committee) concerning the problems with bond insurers and the notion that Wall Street was lightly regulated. Ferguson stated that there is a deal between the Democrats and the Republicans in which the Republicans would support mortgage relief and, in return, the Democrats would not try to regulate finance this year (i.e., nothing will happen politically until the next president takes office). He also noted the folly of self-regulation (e.g., recent reports that the London Inter-Bank Offer Rate [LIBOR] had been faked).

The Fed outlined its reasons for not bailing out the stockholders of Bear Stearns, but it has not shown how it has aided the stockholders of JPMorgan Chase and other primary security houses. Ferguson questioned why nothing has been done to return to the public some of the value created by the Fed's actions toward these firms.

During the administration of President Herbert Hoover, the RFC gave aid in return for preferred stock—an arrangement that paid for itself. By comparison, \$50 billion a week exits the Fed's primary security-dealer facility, and nothing is returned to the public. Moreover, there is a confidentiality agreement between JPMorgan Chase and the Fed.

Ferguson also questioned why we were not currently in a New Deal world, and he objected to the supposed “productivity advances” of the current model of selling securities. In light of extensive historical research, his observations on the New Deal did not align with standard accounts (see his *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems* [1995]). Ferguson noted that Hoover was running for reelection in 1932, and as the incumbent president, he was responsible for the banks. The financial situation worsened prior to the election and resulted in big losses when Germany collapsed and Great Britain abandoned the gold standard, and there was a run on the dollar. The banking community (along with the Treasury secretary and the president) tried to establish the National Credit Corporation and roll over the bad bonds (mostly in railroads) into something supported by bankers. This action was similar to Henry M. Paulson's plan a few months ago regarding special-purpose vehicles. However, in 1931, the bankers were unwilling to support the corporation or the plan, and time was lost. Negotiations between Hoover, Treasury official Ogden L. Mills, J. P. Morgan & Company, and other New York banks led to the creation of the RFC, which was designed to provide liquidity and restore confidence in the banking system, but remained idle until President Franklin D. Roosevelt took office in 1933.

Ferguson outlined some of the personal links between the financial institutions in the early 1930s. He observed that the American bankers not only supported Hoover in 1932 but also tried to control the Democratic nomination (their candidate was Newton D. Baker). In essence, the general U.S. economic strategy was up for grabs at the beginning of Roosevelt's administration. The common belief was that the separation of investment from commercial banking (the Banking Act of 1933) would apply only to national banks. The end results, however, were policy failures and bank closings at the onset of the new administration, followed by a total prohibition of investment-commercial banking. Thus, political obstacles in the U.S. (banking) system were removed only when the situation became untenable.

Today's situation mirrors events in the 1930s. Paulson's (privately run) proposal was abandoned (and valuable time was lost); there was a slow response to a bailout; and there is infinite confidence in

moral suasion, which will probably make everything worse. Ferguson questioned the viability of the international design. He noted that countries were not dumping dollars, and that American troops in Iraq were really at the heart of the dollar story. He also noted that relations with Europe have not gone to pieces, there have been no bank competition issues as in 1932–33, and the primary security dealers have been allowed into the mix. He further noted the issue of party finance. The banking community's leading choice in 1932 did not win the nomination; in contrast, our next president will make the basic decision about financial regulation, and both parties are overwhelmingly tied to finance. Thus, everything else is rhetoric.

**ALEX J. POLLOCK** outlined the logic of the bubble and bust. He observed that Hyman Minsky's media presence is pronounced once again, so Minsky is a coincident financial indicator. He also observed that financial history repeats itself, as expressed in Walter Bagehot's *Lombard Street* (1873), where Bagehot concluded, "Every great crisis reveals the excessive speculations of many houses no one before suspected." Bubbles are hard to control because so many people are making money from the rising prices of the underlying assets. Everybody appears to be winning, including the politicians who cheer the rising home ownership rates and the expansion of housing credit.

According to Minsky, it is important to think about the interaction of balance sheets and cash flows. Money made in a bubble stems from the overexpanded balance sheets of somebody else that include the buildup of risky assets with promises about the future. Increasing leverage and debt perform well during the bubble period—delinquencies and defaults are low, and the whole structure appears to be becoming less risky. The reality is that risk is increasing. Minsky calls this process the "endogenous build-up of financial fragility," where, in a euphoric economy, short-term financing of long-term positions becomes a normal way of life. In this setting, the market regards projected future increases in asset prices a legitimate part of the loan-to-value ratio. According to Pollock, however, we should observe a falling loan-to-value ratio when an asset inflates in value (and the risk increases), but the opposite is true. As observed by Velleius Paterculus in his *Compendium of Roman History* (circa A.D. 30), "The most common beginning of disaster [is] a sense of security."

Success depends on the validation of cash flows in the balance sheets, but validation in a bubble is impossible, so panic follows. "Panic" describes the role of the short-term investors and lenders (e.g., buyers of prime commercial paper, repurchase agreements, interbank loans, and bank depositors) who are searching for a virtually riskless short-term position. When the short-term lenders realize that they are holding a lot of risk, they disappear; this response sets off the bust, which, according to Minsky, is a discontinuity. Pollock's "plank curve" illustrates the process. It represents the amount of liquidity in the market as a function of uncertainty and fear, and the sudden downward change in direction at the end of the period has the appearance of stepping off the end of a (ship's) plank.

There are also clear patterns in the wake of the bubble and bust: the political reaction (e.g., the search for the guilty), regulatory changes (the creation of mechanisms, such as the Federal Reserve in 1914, to ensure that this never happens again), and an expansion of the government's balance sheet (i.e., government guarantees to bankers and other corporations). Although you can't eliminate financial cycles without socialist stagnation, you can make them more tolerable, said Pollock. He noted that the government's balance sheet was expanding now in a fairly dramatic way in terms of the Fed, the Federal Housing Administration (Fanny Mae and Freddy Mac), and the Federal Home Loans Bank (with the real discount window), where lending greatly exceeds that of the Fed.

Pollock referred to the 1930s-era Home Owners' Loan Corporation (HOLC) as a lesson for today's housing and subprime bust. He presented three approaches to ameliorate the current situation: (1) refinancing of troubled mortgages in terms of new loans on a new basis; (2) including major losses for the holder of the mortgage when refinancing; and (3) offering cash realization of loans, where lenders incur some loss in cash terms but are reliquified at the same time, as opposed to holding nonperforming (dead) loans.

The new mortgages ought to be on a sustainable basis relative to the new values of the properties and incomes. These approaches, under the guise of a program similar to the HOLC, should proceed in spite of moral hazard and some expected losses, because the program can be profitable when there is a flight to quality (i.e., a rush to own Treasury securities and get a government guarantee). Moreover, the program should be stand-alone and temporary, disappearing when there is a return to normal market behavior. There is currently a bill in the House of Representatives that would do this, noted Pollock.

The most important information asymmetry is between borrower and lender. Therefore, Pollock proposed that there should be a straightforward statement explaining what the mortgage means to the borrower. Based on his recommendation, a bill is being introduced into the Senate by Senator Charles E. Schumer (D-NY). An important structural point is that the credit decision maker has not retained the credit risk. There is a systemic difference between mortgages originated by (small) own-account lenders (e.g., banks and savings and loan institutions) and those originated through a broker or mortgage bank. The entity making the credit decision should be responsible for a significant part of the credit risk, but current regulations and rules make this objective difficult to accomplish.

In sum, Pollock's prescription is a temporary reinvention of the HOLC program, a permanent one-page disclosure for borrowers seeking mortgages, and a means of ensuring that credit decision makers assume the risk. The study of financial history helps us to understand the human, financial, and political patterns.

**WALKER F. TODD** recommended that all bank officers and broker-dealers pass a history test about financial panics, including the works of Charles Mackay, Charles P. Kindleberger, and C. Lowell Harriss. He outlined his rescue plan—a single-purpose, stand-alone entity with a defined term limit—by which the State of Ohio could refinance mortgages in response to the current debacle of subprime mortgage lending. The history of the HOLC, created by the Loan Bank Act of 1932, emphasizes the importance of leadership and political institutions. Therefore, it is necessary to carefully select the person who would run the entity because it would be handing out public money for free.

Todd noted that when the financial crisis began, the Fed had \$800 billion on its balance sheet, but it has already committed one-half of this amount to the primary-dealer community without public debate. Moreover, the Fed will keep increasing the amount at each new (28-day) auction cycle in response to ongoing requests by the dealers. As a result, there will be insufficient Fed funds to carry out proposals such as D'Arista's new system of reserve management (see pp. 45–46).

Todd suggested that conference participants introduce his plan, which was carefully crafted for conditions in the heartland, to the State of New York. He observed that the home mortgage foreclosure crisis could be divided into two areas: the Sunbelt states (California, Arizona, Nevada, and Florida) and the greater New York region, where there was a speculative bubble in housing prices; and the Great Lake states and cities in the Midwest (e.g., Cleveland and Detroit), where there was no bubble. Thus, the solution to the mortgage crisis will vary between the two areas.

The highest per capita foreclosure rates have occurred in the areas without a speculative housing bubble (especially in minority neighborhoods) because of a new breed of mortgage lenders. Refinancing reduced homeowners' mortgage monthly payments, but when these payments were reset higher a few years later, in an environment of declining employment, the reset had devastating consequences for household finances. Todd noted that the refinancing options were advertised as "fixed-rate mortgage loans," and the Fed allowed lenders to get away with this misinformation.

In Ohio, the state has proposed to finance the appointment of an attorney for every homeowner wishing to contest mortgage foreclosure of the homeowner's property. Todd said he believed this approach was fruitless, because the banks would still be left holding the bag even if all the attorneys won their cases. A successful plan needs to provide relief to both homeowners and financial institutions. History suggests that the most effective approach is to implement a state-level restructuring of mortgage loans patterned after the RFC.

According to Todd, states can and should act on their own in confronting the mortgage debacle. His plan includes creating an entity or board and issuing bonds for the principal amount of mortgages to be refinanced. State financing would place a cap on the rate and concentration of foreclosures, and a floor under housing prices. The entity should be ready to purchase all mortgages within certain parameters at a purchase price that the lenders and investors advanced or paid (taking into account accrued interest already received). No homeowner should be charged interest greater than the initial rate for floating-rate mortgage loans or more than 3 percent above the Treasury's five-year note rate on the date of issuance of the mortgage for fixed-rate loans. Homeowners would be expected to stay current on their mortgages at the new rate, and the state's potential liability could be capped. Essentially, the state entity would pay out higher-rate obligations and receive lower-rate income streams. Losses would be recovered through the state's taking out a lien on the covered real estate equal to the expected final value of the payment differential for each mortgage. Borrowers, Todd said, should be encouraged to seek private sector refinancing for conventional fixed-rate mortgages after 10 years in the program. He also outlined how the state entity could respond when a depository institution tendered its mortgage portfolio.

In essence, the state would fund the program by borrowing money under tax-exempt bond issues, an action that has the support of the Treasury and the White House. A plan by Congress to impose a penalty on the face value of the loans is unconstitutional (i.e., taking private property for public use), so the state would have to offer par values to the lenders less any accrued interest paid since the inception of the loan. Pollock has stated in public that he would want warrants on the common stock of the banks that get bailed out. By contrast, the financial establishment wants the Federal Reserve balance sheet transferred into its corporate coffers without any executive compensation or effect on stock values.

Todd recommended that the state maintain the principles and qualifying standards of the Hope Now program and facilitate financing for those who qualify, with a cap of, say, 10 percent of the equity value of the home and the chance to refinance for 10 years at a fixed rate that is subsidized by the state. By adding 1 percent of net equity per year, the homeowner would have 10 percent equity after 10 years, and could then go to the Federal Housing Administration for refinancing. Nontax revenues would be needed to fund this program, but in states such as Ohio, all of these revenues have been directed toward an economic stimulus package that includes a host of pork projects that will do nothing in the long run.

Since a targeted mortgage relief package places a floor under falling house prices, it would mean the beginning of recovery. And since the housing crisis is the root of all our problems, Todd said, it

should be addressed first. He cautioned that attempts to address the housing problem at the national level would be met by the standard Washington/Greenspan/economist arguments that bubbles either don't exist or are impossible to identify. The response to such sophistry is to adopt the following rule of thumb: "If it is expanding by more than 25 percent a year in a low inflation environment, then you should assume that it is a bubble."

## SESSION 2

### *Minsky and the Crisis*



L. Randall Wray, Robert W. Parenteau, Jan Kregel, and Greg Hannsgen

#### **MODERATOR:**

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#### **JAN KREGEL**

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#### **L. RANDALL WRAY**

Senior Scholar, The Levy Economics Institute

**JAN KREGEL** applied an aspect of Minsky's financial instability hypothesis to understanding the subprime mortgage crisis. According to Minsky, the difference between cash inflows and cash commitments determines the margin of safety, and the size of those flows determines the relationship between hedge, speculative, and Ponzi financing units. The idea of using cushions or margins of safety would have enabled us to foresee the fragility that was inherent in the evolution of markets after 2004, suggested Kregel.

The origin of this idea stems from Moody's *Manual of Investments* (prior to 1930) and Keynes's essay "The Consequences to the Banks of the Collapse of Money Values" (1931). In Moody's manual, "margin of safety" meant the ratio of the balance of interest to the earnings available for interest on a bond. According to Keynes, banks allow beforehand for some measure of fluctuation in the value of assets by requiring what is called "margin" (i.e., the security offered by the borrower to the lender)

from the borrower. The normal definition of margin of safety was associated with spread or net-interest banking.

Securitization related to residential mortgage-backed securities differs from net-interest banking, so we have to look at the margin of safety differently, said Kregel. The cash flows of adjustable rate mortgages (ARMs), option ARMs, or mortgages with resets were structured initially to look like hedge financing schemes. At reset, however, the margins of safety disappeared and these structures were converted from hedge to Ponzi financing schemes, unless borrower incomes rose more rapidly than the cash commitments on the loans, interest rates remained stable, or house prices continued to rise.

The mortgages that converted into Ponzi schemes were placed in securitized structures where the margins of safety were represented primarily by overcollateralization, a surety guarantee from monoline insurers, or some form of bank guarantee (e.g., liquidity puts). According to the State Foreclosure Prevention Working Group, homeowners were having difficulty paying their subprime loans even before the reset period, so the high delinquency rates reflect the impact of weak underwriting and fraud in the subprime loan origination system.

Overcollateralization for conforming loans was set by the issuer and not by the rating agency, which had the experience. Thus, the margins of safety within the collateralized mortgage obligations were insufficient from the beginning. Moreover, the margins of safety were affected by the use of multi-tranche payments, undercapitalized monoline insurers, and guarantees that were not on the banks' balance sheets. In the end, the entire structure was a Ponzi scheme that would inevitably collapse, since the margins of safety were insufficient to cover the risk.

Kregel quoted Louis Ranieri, the supposed inventor of the mortgage-backed security, relating to his assessment of new investment instruments that were designed in the 1980s and 1990s. According to Ranieri, the investment banks invented an instrument that could be traded on the condition that no credit decisions were necessary and the credit mechanisms were essentially risk-free. The only remaining questions for investors concerned their outlook on interest rates and preferences on maturities. However, securitization started to break down as a concept when the issuer imposed on the investor the responsibility of analyzing the underlying collateral.

In order to successfully securitize an asset type, one must be able to predict the actuarial experience of default. Although single-family homes have an actuarial foundation, the problem could not be mitigated by insurance because the premium would be prohibitively expensive. Many of the factors that gave standard mortgage products high credit quality were missing in the newly devised mortgage products. The graduated payment mortgage (GPM) product to assist families that could not previously afford home ownership failed because a pool of GPM loans has default rates well above the actuarially allowable standard (i.e., three or four out of a hundred). Furthermore, if pay raises slowed or a recession occurred, defaults would be catastrophic. Structures that depend on people succeeding and earning more each year do not follow the same actuarial trend as traditional mortgage products. Ranieri also acknowledged that ARMs suffered from structural flaws, and that he foresaw their demise as early as 1996.

Kregel noted that the ARMs offered in the marketplace in 2004–05 were structured slightly differently from those addressed by Ranieri, but that the outcome was the same. He also noted that FICO credit scores were originally developed for applicants for credit cards and automobile loans, and that these scores had no history with subprime borrowers. According to HSBC Finance Director Douglas

Flint, FICO scores are ineffective when lenders are granting loans in an unusually low interest rate environment. And, according to financial analyst Robert L. Rodriguez, in a 2007 speech, Fitch reported that its credit-rating models were primarily determined by FICO scores and by the continuation of home-price appreciation. Moreover, Fitch admitted that if prices declined by 1 to 2 percent for an extended period of time, the model would break down completely and impair tranches as high as AA or AAA. This prognosis aligns with that of Ranieri—ARMs do not work and could produce catastrophic defaults. Furthermore, every time an insurer is downgraded, all of the structures that the insurer has backed are downgraded as well.

The sales premise that all credits are created equal was suddenly no longer true, irrespective of credit enhancements, observed Kregel. The experience of individuals who originated the entire securitization scheme for residential housing shows that collateralized structures do not provide margins of safety and are, therefore, Ponzi schemes. Thus, financial history and the correct identification of margins of safety are extremely important in determining the stability of financial structures.

**ROBERT W. PARENTEAU** addressed five key macrofinancial questions: (1) Is it useful to employ a Minsky macrofinancial perspective? (2) Is this Minsky moment already over? (3) Can't markets self-adjust? (4) Is the Fed the fixer? and (5) Where do we go from here?

At last year's conference, Parenteau noted that something had gone wrong with the financial markets and the credit allocation mechanisms, and that the financiers had gone wild. At that time, he expected that there would be a housing bust, that household deficit spending would reverse and profit margins narrow as a result, and that layoffs and further income-growth erosion were inevitable. He also expected more difficulty in servicing private debt loads, a credit crunch episode that further restricts household deficit spending, and a less effective outcome if the Fed lowered interest rates in response to a recession (given the housing stock overbuild and low corporate reinvestment rates). Further, he noted that the principal exit strategies, such as rebuilding the public capital stock and encouraging domestic demand-led growth abroad, were not yet on the agenda.

Since then, the economic outcome has begun leaning toward a hard landing, and the new financial architecture, while efficient in terms of risk distribution, has proved inefficient in terms of credit analysis. Parenteau's expectation that there would be six stages of decoupling arguments defending the soft-landing view and forestalling the hard-landing conclusion came true. Financial innovation, he said, along with repeated moral-hazard interventions, appears to have corrupted the private sector-credit allocation mechanism. The signs that financial instability was beginning to ripple out from the sub-prime mortgage market and more esoteric mortgage derivative products, and that this instability was unlikely to be contained, also materialized, as did expected discussions about the next asset bubble (to revive economic growth) and how to realign incentives in the new financial architecture. Parenteau said he believed he had previously understated the issues, in keeping with Keynes's assuming the role of Cassandra in his *Essays in Persuasion* (1931).

Parenteau noted that the "Minsky moment" is more than a moment because Minsky's financial instability hypothesis refers to an inherent process that is endemic to a normal, functioning economy (i.e., stability breeds instability). The "moment" is not over, since house prices have not completed their deflationary path, profit shares remain close to their peak, current financial imbalances require a much larger fiscal push, and a larger trade swing (requiring domestic demand stimulus abroad) is



needed to mitigate the financial imbalances. The Fed is pushing on a string because lower Fed funds rates have not affected private market interest rates (e.g., conventional mortgage rates and corporate bond yields). Furthermore, loss recognition by financial institutions is not yet complete—one of the bigger shoes still to drop.

Parenteau also noted that there has been a surprising lack of discussion about the cause of the recession. The Fed did not kill the expansion. Rather, it was the endogenous unwind of the asset-bubble/Ponzi scheme—in other words, Minsky’s financial instability hypothesis is correct. In fact, notable supporters of financial market deregulation (e.g., former Fed Chairmen Alan Greenspan and Paul Volcker; Richard Fisher, CEO of the Dallas Fed; and the IMF) are now reconsidering their position, which may lead to an obituary for financialization. We are in a watershed moment, said Parenteau. It is now recognized that debt can amplify shocks to consumer spending rather than smooth consumer spending. At both a practical and a theoretical level, people recognize that something has shifted.

Keynes’s revolutionary point is that markets are not self-adjusting to full-employment equilibrium. The reason is not a lack of price or wage flexibility, or information asymmetry, but the price adjustment dynamics in durable asset (and financial) markets that could be perverse, combined with the lack of (future) information. As a result, people use coping mechanisms such as convention formation and investor/lender herding, and the problem lies in the transition.

When the spot price of durable assets falls, collateral values and the net worth of asset owners also fall, reducing the capacity to borrow. This perverse price adjustment process can ultimately wreck societies—a concept that completely eludes the market fundamentalists and the New Keynesians now running the Fed. Contrary to conventional theory, a decline in the spot price of durable assets can increase rather than reduce the net excess supply; that is, lower prices lead to lower prices because there is more supply in the market. Using J. R. Hicks’s high elasticity of expectations, the forward price may fall below the spot price and shift the demand curve for durable assets, so that Minsky’s present value reversal arises when there is no incentive to produce. The stock effect overwhelms the flow effect. The same dynamic holds true for financial assets, where the forward price is even more unmoored because of leverage and shifts in conventions and herding dynamics.

Parenteau observed that, in spite of the 300-basis-point decline in the Fed funds rate, mortgage and corporate bond rates have scarcely moved, courtesy of bank loan restrictions. There is a liquidity hoax, he said, because the Fed is not injecting net liquidity into the financial system. Rather, the Fed is changing the composition of its balance sheet—buying riskier assets and selling Treasuries. Furthermore, the financial sector’s balance sheet (excluding hedge funds) is three times that of the Fed and the Fed’s balance sheet is swamped by the financial sector—in stark contrast to the situation in the 1930s. If the Fed wants to monetize by buying assets from broker-dealers, there is the impression that it is able and willing to buy all assets. But the Fed is, in essence, bluffing. It would have to increase the size of its balance sheet enormously. The reason this increase has not happened is that we are in a period of soaring commodity prices and falling dollar exchange rates. Any expansion of the Fed’s balance sheet may spark a flight from dollar-denominated assets. Thus, the Fed may have less room to maneuver this time around.

Parenteau outlined three essential targets and three possible scenarios. In accordance with the approach of Minsky and Keynes, the targets are stable asset prices (i.e., house prices), a coordinated debt-workout system with incentives, and stable income growth. The three scenarios were presented

as caricatures: (1) “Glass-Steagall on Stilts” (i.e., the problem is greater than that in the 1930s and the financial sector is much more sophisticated today); (2) “Ponzi Nation” (franchising casino capitalism); and (3) “Leaving Las Vegas” (reclaiming the ownership society).

The keys to avoiding “It,” or another Great Depression, relate to the response of fiscal and monetary policy. The presence of a lender of last resort and low interest rates support asset price stabilization. Deficit spending supports income growth, while regulation reduces the potential for financial instability. Moreover, it is necessary to direct the policy moves of investors, lenders, consumers, and entrepreneurs/managers.

In the “Glass-Steagall on Stilts” scenario, the Fed has to be the lender of last resort if it continues to function as a market maker of last resort. A reality-based economy should make off-balance-sheets illegal, and there should be an agreed-upon definition of earnings per share. In addition, leverage should be limited, capital ratios should vary procyclically, margin requirements should apply to a variety of financial instruments and be actively managed (the Fed stopped doing this in the 1960s), and greater transparency should ensure that all transactions go through the exchanges (i.e., over-the-counter markets should be illegal). A shadow financial system has been allowed to develop. Going forward, there should be no more asymmetric responses to bubbles. The “Greenspan put” should be repudiated and conventional debt-trap equations should be applied to the private sector. Parenteau questioned the difference in substance between ownership and a collateralized loan, where the collateral can be sold at the whim of the creditor (i.e., the Fed).

According to Parenteau, it appears that we are going the way of Glass-Steagall on Stilts as opposed to the other scenarios, which extend the trajectory of the last 30 years into the theater of the absurd. Democratizing the Ponzi Nation means encouraging all asset bubbles that speed up tangible capital accumulation and build out the capital stock, as well as encouraging mass participation in bubbles where the emphasis is on asset redistribution rather than income redistribution. Leaving Las Vegas means adopting an automated stake-holding mechanism (i.e., mandating the issuance of diluted shares and the use of proceeds to pay down financial debt), deleveraging the financial system as the bubble proceeds, and holding the proceeds in a sovereign wealth fund.

In Parenteau’s view, the watchword of the past three decades—“There is no alternative”—should be replaced by “‘No alternative’ is no longer acceptable to anyone anymore.” This means the demise of financialization and the arrival of the great reregulation. However, these changes will probably require more economic pain in order to generate the political will. We’ve allowed the pirates to run the show, Parenteau said, and they have been looting under the banner of “Reality is what you can get away with.”

**L. RANDALL WRAY** summarized his recent Levy Institute Policy Brief, *Financial Markets Meltdown: What Can We Learn from Minsky?* Minsky hypothesized that the structure of a capitalist economy becomes more fragile over a period of prosperity. As expressed in the brief, the belief that the world is now more stable and less vulnerable to “shocks” (the “Great Moderation”) allowed greed to trump fear. According to Wray, Minsky would label the faith in the era of the Great Moderation a “radical suspension of disbelief.”

The current crisis repudiates the Big Government/Neocoon model, which favors self-regulation by markets and socialized risk. According to Minsky, the crisis relates to money market capitalism, which is an economic system dominated by finance. The fundamental characteristics of money manager

capitalism are that securitization replaces banking and highly leveraged positions hide “unknown unknowns.” Keynes believed that the two fundamental flaws of capitalism are the unequal distribution of income and a missing tendency toward full employment. Minsky added a third fundamental flaw: capitalism is unstable.

Wray explained the historical development that led to today’s complex and fragile financial system, and how the seeds of crisis were sown long ago by lax oversight, risky innovations, and deregulation during a lengthy period of relative stability. He pointed out that, according to Minsky, there is no final solution to the problems of money manager capitalism because it was the relative stability of the postwar period that encouraged risky innovations and led to the crisis.

The Fed has been increasingly aggressive in using interest rate changes to fine-tune the economy, when only 20 years ago, all economists agreed that you could not fine-tune the economy. Partly in response to the Fed’s actions and the growing belief in the Fed’s role, financial institutions made credit more elastic. Irrational exuberance, which was based on the belief in the “New Economy” in the 1990s, and unprecedented real estate appreciation, which validated increasingly risky Ponzi finance in the 2000s, is the result of long-term, policy-induced, profit-seeking financial innovations. Today, Wray said, we face a collapse of the entire financial system, as the crisis exposes the inherent flaw of money manager capitalism when fear disappears and hope becomes, in the words of securities market expert Erik R. Sirri, “a crappy hedge.”

The traditional role of banks evolved in order to mitigate the risk of another debt deflation rivaling the Great Depression. However, governments relaxed regulations so that banks could take direct positions in all aspects of the financial system. According to Wray, many of today’s problems can be traced back to securitization (the “originate and distribute” financial model), leverage, the demise of relationship-based banking, and the dizzying array of extremely complex instruments that few people understand. The banks’ share of the financial system declined by more than half, from 55 percent in 1960 to 23 percent today. Moreover, competition has pushed interest rate spreads so low that a near-zero default rate is required to validate positions. And an increasing proportion of the financial system is now outside the Fed’s oversight and (explicit) protection. Risk was never assessed, shifted, or reduced, and it returned to the banks, where liquidity problems very quickly led to insolvency problems.

Asset price depreciation will not be restricted to residential real estate. As economic activity slows, there will be revelations of problems throughout the entire financial sector. Wray estimated that the combined losses could amount to several trillion dollars (in a \$13 trillion economy). Moreover, the United States will feel the effects of the current crisis for some time—perhaps a decade or more.

Wray noted that the policy initiatives of the George W. Bush Administration appear to be designed to help creditors rather than debtors. He instead recommended much larger stimulus packages, which are probably politically infeasible. A return to stagflation looks increasingly likely, as it will be difficult for the United States to grow its way out of the problem.

Wray discussed lessons from Minsky that could be used to reformulate policy and deal with the present crisis. He called for two major kinds of reform in terms of preserving home ownership and restoring regulation and supervision. There should be mortgage relief that stabilizes the real estate sector and reform that amends the bankruptcy laws. Since the problems are concentrated in adjustable rate mortgages, perhaps we ought to prohibit this option, along with its teaser rates for first-time and low-income buyers. Wray also called for the creation of a new institution in line with President

Franklin D. Roosevelt's Home Owners' Loan Corporation. According to Minsky, government should act as the employer of last resort in order to eliminate involuntary unemployment, reduce inequality and poverty, and prevent the problems from morphing into solvency problems. Minsky preferred policy that would promote small- to medium-size financial institutions (rather than their consolidation), and policy that was biased toward market segmentation.

We must return to a more sensible model, with enhanced oversight of financial institutions, said Wray. Monetary policy should stabilize interest rates, maintain direct credit controls, and strengthen its supervisory and regulatory duties. Rather than favoring investment, we should encourage consumption and employment, which are more stable. Furthermore, he said, bailouts will be required to avoid real, not financial, losses (lending at a discount is not a bailout). A financial crisis is not the time to teach markets a lesson by allowing a generalized debt deflation to "simplify," as Minsky put it, the system.

### SESSION 3

#### *Impact of the Crisis on the Economic Outlook*



Frank Veneroso, James W. Paulsen, W. Ray Towle, and Richard Berner

**MODERATOR:**

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**RICHARD BERNER** noted that his remarks did not reflect necessarily the views of Morgan Stanley or its staff. He also noted that Minsky is a shadow member of Morgan Stanley's risk management committee because it understands how stability breeds instability at both the macro and micro levels. At the macro level, the markets comforted participants when they added leverage in the search for yield and when they sold securities and enhanced volatility. At the micro level, participants securitized under the assumption that everything could be marketed, a notion that added embedded leverage and complexity to securities. The comfort level extended to the concentration of risk into a few hands; thus, the façade of stability created fragility.

Although investment vehicles such as structured credit and other financial innovations may seem new, the themes are actually quite vintage, said Berner. In a book by Robert F. Bruner and Sean D. Carr, *The Panic of 1907: Lessons Learned from the Market's Perfect Storm* (2007), the authors note that

complexity, buoyant growth, and rising leverage were key elements contributing to the market's "perfect storm," and deleveraging of balance sheets was a key ingredient in the unwinding process.

Reintermediation of the banking system—a securitization mechanism—has resulted in more rapid deleveraging than in the past. The shock of subprime defaults has triggered dislocations in the nonagency mortgage-backed securities market, the asset-backed commercial paper market, and the offshore LIBOR funding market. These disruptions promoted a forced reintermediation of the global banking system in response to a procyclical contraction in credit and an increase in credit costs, leading to a credit crunch. According to Berner, the deleveraging process remains the key threat to global growth.

Reintermediation promotes a procyclical credit contraction in three ways: (1) credit concerns trigger liquidity backstops for conduits and special investment vehicles, forcing a shift from an off-balance-sheet funding source that requires little capital to one that requires capital and a reduction of leverage in the financial system; (2) banks raise the cost of new liquidity and credit facilities; and (3) assets placed back on the banks' balance sheets may boost capital requirements for some European banks.

The nuances in the reintermediation process matter in terms of the degree to which credit tightens. After honoring existing commitments, the banks must fund new commitments by tapping dislocated markets such as the LIBOR market, which is a benchmark for loan pricing and where there is differentiation by quality of institution. This new pricing regime won't evaporate anytime soon, said Berner. Since the turmoil began, banks have raised \$165 billion in new capital globally, but the capital has come at an increased price, since there is a higher probability of a capital call by borrowers. Moreover, the return of assets to bank balance sheets is likely to increase risk-weighted capital requirements.

Berner addressed eight implications of the reintermediation framework outlined above. (1) The current liquidity and credit cycle has a long way to go. Higher volatility and steeper yield curves are here to stay over reasonable investment horizons. The economy is in recession and recovery will be slow and labored. (2) The globalization of finance and the disbursement of risk means that it is impossible to predict the timing and location of contagion. (3) Financial innovation has not altered the fact that confidence is still essential for markets and leveraged institutions to function. (4) The "originate and distribute" model of credit creation has undermined sound underwriting and risk management, so both practices have to be strengthened. (5) Reintermediation gives banks an opportunity to take back market share and recoup lost pricing power. (6) Market participants should count on more regulation and reporting to help regulators assess risk profiles of financial institutions (i.e., a financial services model involving less leverage and lower absolute returns). (7) Write-downs and recapitalization of leveraged lenders is essential to fixing the crisis. (8) There is a new (and welcome) debate among central bankers about how to respond to significant changes in asset prices when current models do not adequately capture the influence of these changes on growth and inflation. Experience tells us that asset prices matter for economic behavior, so policies should consider them in a forward-looking way.

Berner was sympathetic to the notion put forward by Henry Kaufman, an independent consultant and former mentor at Salomon Brothers, that one regulator should oversee all large, complex financial institutions. Trading activities must be marked-to-market, regardless of venue; new standards for risk management must be designed in terms of capital, leverage, and a broad range of circumstances; and financial infrastructure matters.

**JAMES W. PAULSEN** took a view contrary to that of previous presenters in terms of the state of the U.S. economy and the financial crisis. He focused on how the current situation will play out, and observed that crises happen regularly, yet none of them have led to another Great Depression. The response in a crisis is to be more aggressive from an economic and investment standpoint because there is a tremendous rally in response to lower interest rates, more liquidity, and cheaper stock values.

In Paulsen's view, the end of the current crisis is at hand. He pointed to the fact that markets generally bottom when there is a peak number of "scare articles" in publications such as the *Wall Street Journal* (e.g., a new record for these articles was set in March 2008). This response occurs after many investors have already cashed out of the market and the markets have discounted the reality, as well as their worst nightmare. The current market is regularly referred to as the worst crisis in the postwar era, but the stock market is off only 11 percent from its all-time high—which was achieved less than six months ago.

Paulsen noted that every crisis consists of two significant elements: fundamental balance sheet and income problems, and fear (about something unique). Fear is the dominating element in this crisis, he said. Although there are problems in the housing and auto industries, and the subprime market is a mess, the vast majority of the economy (i.e., 95 percent of the debt) is not in bad shape.

When the crisis started, the Fed responded with its traditional medicines (interest rates and liquidity injections) to correct fundamental economic balance sheet problems and income statements. The response did not work, so the Fed bid and placed a floor under prices in order to boost investor confidence. Since most bad debts have been written off, the crisis now is more about write-downs of good debt that no one really thinks will become defunct. In fact, the situation has improved since the Fed's intervention in the markets. The key, then, is not to drop interest rates but to boost confidence.

According to the corporate bond–yield spread of 3.25 percent (Moody's BAA corporate bond yield less the 10-year Treasury yield), there is greater risk now for a massive corporate credit default than at any time since the Great Depression. That view, however, is at odds with the results of a fundamental credit analysis because of the effects of fear and the lack of policies to deal with that fear. U.S. nonfinancial corporate balance sheets and income statements show some of the strongest ratios in decades (e.g., cash-assets-to-total-debt ratios, net-cash-flows-to-capital-spending ratios, and profit margins), while the debt-to-net-worth ratio is the lowest since the 1960s.

An example of the level of overreaction by investors is that high-yield bond spreads were so low in 2007 that one could expect to lose money even if the bonds defaulted at the lowest interest rate in history. Now these same spreads are so wide that one would make money even if the bonds defaulted at the *highest* rate in history. If we are in a recession, Paulsen said, this recession has been the best forecast ever. There are no inventories, corporations have more cash relative to capital spending (buying power) than in the last four decades, and household real liquid assets in the past year have grown at a rate above inflation because households are saving for a rainy day.

The economic turnaround will require further booster policies from the Fed, combined with evidence that the economy has bottomed. Although the housing and auto industries have declined significantly (at a 26 percent annualized pace in the fourth quarter of 2007), the decline is associated with only 7 percent of the economy. The remainder of the economy grew almost 4 percent (year-on-year). The recession, if we are in one, is concentrated. Thus, we don't have to end the weakness in housing, which has taken 1 percentage point off real GDP growth for the last six quarters, but we do have to stop the collapse of housing.

If the collapse flatlines, there will be a huge boost to economic growth because we would be adding to the economy by subtracting less from the housing industry. The activity levels of housing that are included in real spending are close to bottoming. The best leading indicator is the relative price performance of the S&P 500 home builders' stock price index, which is now performing at its highest level since the crisis started. Therefore, activity levels may bottom this quarter or the next. Furthermore, home sales are flat (not falling), absolute inventories of homes for sale have actually fallen for one year, conventional mortgage rates are lower by a full percentage point over last year, and refinancing and the affordability index are up. These are good signs.

The second boost to the economy will be the level of policy stimuli (e.g., rebate checks) and the level of MZM, the liquid money supply. And, although credit growth and bond issuance have slowed, they have not died. Moreover, the impact of trade is offsetting the decline in housing. Net exports will grow incrementally because of the weakness in the U.S. dollar.

What has been happening, said Paulsen, is not a crisis collapse but a change in the composition of U.S. growth, from an economy dominated by the consumer to one that requires other sources of growth. In essence, we are going to drive out of the consumer situation the same way we drove into it. The consumption growth rate will fall and will be replaced by real net exports, leading to an increase in the saving rate and a decrease in debt. The new emerging economies were built at least in part with our excess spending, so now we (and the Europeans) should be able to take back some growth by devaluing our currencies against those of the emerging economies (where 60 percent of our deficit lies).

**FRANK VENEROSO** stated that the policy recommendations for the financial crisis do not fit the problem. He noted that we are experiencing the worst financial crisis in three generations but there has not yet been a recession. Financial (banking) crises are caused by a decline in incomes, whereby the economy contracts first because of Ponzi finance. In previous periods (e.g., 1989–92), bad loans have represented up to 5 percent of GDP. Using a top-down approach, Veneroso estimated that, in the current crisis, bad loans (credit losses) could ultimately represent 10–15 percent of GDP, or \$2 trillion—a figure in line with Wray's estimate using a bottom-up approach.

Using IMF assumptions (e.g., essentially no growth, some credit restrictions, and low interest rates), along with the notion of no recession, Veneroso conducted his own, bottom-up approach. He derived a larger figure for credit losses than Wray's. He applied the expected loss ratios to miscellaneous items in the flow of funds accounts and commercial Ponzi loans. The potential credit losses associated with these items are in excess of \$1 trillion. In terms of the corporate sector, junk bonds with leveraged loans (\$3 trillion) have grown three times faster than nominal GDP in the current (business) cycle, so potential losses (using normal default rates) could be another \$100 billion. If there is a recession, the default and loss rates will increase significantly. Even in a mild recession, the bad loans and losses associated with \$3 trillion of junk bonds would be \$660 billion and \$400 billion, respectively. Moreover, there are other potential sources of losses.

Veneroso also noted that George Soros has forecast a mean reversion in home prices that would amount to 35 percent. He further noted that half of government-sponsored enterprise defaults are prime, not subprime, mortgages, so house prices will be the determining factor behind the magnitude of defaults and losses. Soros also expected large losses associated with credit default swaps (a \$53 trillion market), but Veneroso acknowledged that the level of risk and losses was too uncertain to quantify.



An additional source of risk relates to rating and value inflation associated with structured finance (i.e., bundling low-grade securities to increase ratings and value them at par). In effect, everything was marked up by the people charging the fees. Therefore, there should be losses on all of these structured products even if there are no surprises (e.g., the ABX indices, which represent the U.S. home equity asset-backed securities, are collapsing). This is not a liquidity problem, because the losses come from multiple sources. The largest culprit is the hedge funds, which want high-yield paper for their leveraged spread structures. Last year, 26 percent of the revenues at the big European banks were from hedge funds, whose revenues were derived by leveraging up, like a bank. Banks are writing down their losses, but the losses associated with hedge funds have been minimal. These funds are the next source of significant losses, reasoned Veneroso.

The recent experience of hedge fund strategies shows large one-year redemptions. Therefore, if a few large macro funds are hiding their losses, there will be enormous pressure placed on all assets and the investment banks. The Fed's bailout of Bear Stearns was associated with collateral that was rated BBB-minus or better, which means it's willing to leverage at 40-to-1 even though hedge funds such as Carlisle went bust while leveraging at 30-to-1. The Fed rescued Bear Stearns because it was afraid of a run, but we are sitting on a time bomb, Veneroso warned.

Commodities are experiencing the worst bubble since the start of the Industrial Revolution more than 200 years ago (e.g., copper, nickel, lead, and zinc prices), in spite of the worst credit crisis in three generations and a likely recession in the United States. The reason is not associated with a super growth cycle—global growth based on exchange rates is no better now than it was in the 1990s, 1980s, or earlier—but with leverage. Commodity derivatives are valued at \$10 trillion, and they have increased at a much greater rate over the last three years than fixed income derivatives and over-the-counter equity derivatives, which represent 80 percent of commodity derivatives. No one is looking at this data, exclaimed Veneroso. When the commodity bubble bursts, there is going to be a whole new problem.

There are two kinds of bubbles: those with, and those without, debt. The housing bubble and derivatives have debt that is highly leveraged, and this toxic bubble is waiting to explode.

## SESSION 4

### *Financial Market Regulation-Reregulation*



Martin Mayer, William Kurt Black, and Jan Kregel

#### **MODERATOR:**

##### **JAN KREGEL**

Senior Scholar, The Levy Economics Institute

##### **MARTIN MAYER**

Brookings Institution

##### **WILLIAM KURT BLACK**

University of Missouri–Kansas City

**MARTIN MAYER** addressed the unintended consequence of change in the trading mechanisms that has resulted in the inefficiency of computer-driven markets. He blamed Greenspan and Bernanke for the current state of affairs: instead of the Fed pushing the markets around, the markets have been pushing the Fed around.

In 1994, the Fed raised interest rates when the markets did not expect it, resulting in the collapse of the 10-year Treasury note, which was the hedging mechanism for mortgage paper. During the last years of Greenspan's Fed, there was a psychological clash between the desire for an announcement effect and the fear of surprising the market. In Bernanke's Fed, the situation is worse because traders act daily on (unhealthy) expectations of what the Fed funds rate will be after their next meeting, and markets are influenced by preprogrammed computers.

Mayer outlined the nature of trading since the 1930s, from the tape reader to the floor trader, and how these people became casualties of the Information Revolution. In the past, the basic

concern was market distortion (manipulation) combined with stock prices governed by artifacts of the trading system. This concern was addressed in law, custom, and regulation. Mayer noted that the markets create synthetic instruments that are easier to trade than instruments with a juridical component, but the relationship between the artifacts and the underlying institutions is not stable. For example, a few months before the stock market crash in 1986, the Securities and Exchange Commission (SEC) gave Merrill Lynch a no-action (private) letter that suspended the up-tick rule for index-related trading on the grounds that maintenance of the prohibition of selling short into a declining market would impede the insiders' index arbitrage.

In the early days of the market, it was generally accepted that the purpose of the securities market was to provide a foundation for the expansion of economic activity. The correct pricing of corporate paper was important to the macro economy as a guide to the allocation of capital. By today's standards, market pricing of enterprise was a clunky and costly process. There was no Fed funds market, no mortgage bonds to finance housing, and no financial futures, except forward contracts for foreign currency, which was a business monopolized by the banks. The Fed set margin requirements for "purpose credit," which was money borrowed to buy and hold financial instruments. In general, the Fed ignored price movements in the stock market.

Although the functions of the markets have not changed, the markets generate an immense catalogue of prices at an incredible speed and consider an infinitely greater variety of factors in setting and changing prices. However, it is not clear that exponentially increased trading results in more accurate prices when the Fed does not dare to defy market expectations.

Mayer observed that more than half of the trading in large markets is algorithmic trading by programmed computers. However, if a fund trades indices rather than securities, the fund manager may not know the degree of leverage. At the center of the analysis is an economic philosophy of diversification and a move from investment in individual securities to investment in portfolios. Therefore, the role of knowledge and judgment is diminished and the money manager's role resembles arbitrage. Judgment of the prospects of the company that issued the stock becomes secondary to the stock's role in a larger strategy.

According to Mayer, the market as a measure of the attractiveness of an investment was never a straightforward calculation. The benchmark changes affect portfolios in unimagined ways, and the math (programming) is not self-correcting. Models fail to recognize the impact of their own proposed trades, while the hunger for numbers leads large investors to use rating agencies. Investors buy a commodities index not out of belief that commodity prices will rise, but because the index correlates negatively with the movement of stock prices. Thus, the market becomes a consumer rather than a supplier of information. The point of the exercise is no longer the allocation of resources but the income of participants—which has become a very large number.

One must consider the technology that will control the new regulations, advised Mayer. A substantial amount of reorganization is needed, and the principles of Minsky would be very useful in this context.

**WILLIAM KURT BLACK** applied his background as a white-collar criminologist and regulator to explain why the regulatory failures under Greenspan and Bush allowed a criminogenic environment (i.e., a perverse incentive structure). He took issue with McCulley's notion that the perfect call and perfect put were assembled into one option package because that is not how fraud is optimized. Black referred to the savings and loan crisis and the characteristics of the acquisition, development, and construction

loan. This loan consisted of a much better combination of options that made it a hybrid instrument, one that included substantial equity. However, appraisals associated with the stated income loans were grossly inflated, so this type of loan involved appraisal fraud in addition to many other types of frauds. At least two different players independently provided fraudulent information. On the call side, grossly inflated appraisals meant that the investment was out of the money. On the put side, there was no downside because the only risk was to one's reputation. However, the people most affected were the most marginal home borrowers, who could have become bankrupt and homeless in the process.

The equity kicker is the thing that gives value to an otherwise worthless call option, which is only in the money if there is a scam take-out sale that hides the losses. The reason that losses lag so much is that fraud actually accelerates after the "Minsky moment" and subsequent meltdown. In order to counter potential losses, people arrange a cash-for-trash deal that not only wipes out the losses but also creates a massive gain. Black lamented that economists are not taught about fraud, nor do they routinely discuss fraud techniques with a (white-collar) criminologist. Why don't the SEC and the Fed have a chief criminologist? Income loans are overwhelmingly stated because they are the best device for fraud and without risk.

The weapon of choice for fraud is accounting. It happened with the savings and loan control frauds and it is exactly what happened in this crisis, Black said. In the modern era, our executive compensation system created a criminogenic environment where fraud makes sense because it is difficult to convict people. Only 200 of 35,000 Suspicious Activity Reports (SARs) submitted to the Treasury department lead to prosecutions. Since SARs are filed only by insured institutions, these figures represent only a fraction of the actual frauds.

Internal controls become the allies of control fraud, which causes greater financial losses than all other forms of property crime combined. The person in charge of the organization uses these controls as a "weapon" to defraud, and his most valuable ally is the outside auditor firm. Regulatory failure is a self-fulfilling prophecy that is consistent with Minsky, Black said. Ponzi finance is the real thing, and the way to optimize an accounting fraud is to grow extremely rapidly and hyperinflate bubbles. These features increase the default rate (the level of toxic investments) and exponentially increase the losses, which are much worse than those associated with nonfraud investments. The defining element of fraud that sets it apart from theft is deceit.

Black noted that bankers do not trust other bankers because they know the games that they play with their own accounting and models. Control fraud is devastating because a person uses his entity's apparent legitimacy, power, and organization to commit a crime. For example, a CEO can optimize the firm for fraud, suborn the supposed controls and turn them into allies, convert firm assets to personal use through normal corporate means, and change the external environment to aid the fraud. Accounting fraud is optimized by overstating asset values, whereby market values are derived from proprietary models; loaning to the worst borrowers to maximize yield and fees; covering up defaults and booking new income via refinancing and sales (the cover-up phase); growing rapidly using Ponzi schemes; and using off-balance-sheet liabilities.

Allies include the appraisers, internal accountants, officers and employees, rating agencies, computerized underwriters, stock analysts, and external auditors. The transfer of accountability (the "responsibility tango") means that no one is responsible for trillions of dollars of losses, so everyone can simply leave and take their bonuses with them. This transfer is done in large part through the deliberate creation

of conflict of interest. A CEO is good at influencing and manipulating people. When a CEO uses accounting mechanisms with clean opinions and appraisal reports backing up a Ponzi scheme, it is almost impossible to prosecute in an environment of deregulation and limited civil suits. Theory that combines private market discipline and reputation is effective only if government moral hazard is absent, Black observed. Effective private market discipline requires effective regulation.

## Participants

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**ROBERT J. BARBERA** is executive vice president and chief economist at ITG, and is responsible for the firm's global economic and financial market forecasts. Barbera has spent the last 25 years as a Wall Street economist, earning a wide institutional following. He was chief economist and director of economic research at Lehman Brothers, and prior to that was chief economist at E. F. Hutton. Before arriving on Wall Street, he served as a staff economist for U.S. Senator Paul Tsongas and as an economist for the Congressional Budget Office. Barbera also lectured at M.I.T. From mid-1994 through mid-1996, he was cochairman of Capital Investment International, a New York–based research boutique. Currently, he is a department fellow and adjunct professor of economics at the Johns Hopkins University. Barbera earned both his B.A. and Ph.D. at Johns Hopkins.

**RICHARD BERNER** is a managing director, cohead of global economics, and chief U.S. economist at Morgan Stanley. He codirects the firm's forecasting and analysis of the global economy and financial markets and is coleader of its Strategy Forum. Before joining Morgan Stanley in 1999, Berner was executive vice president and chief economist at Mellon Bank, and a member of Mellon's Senior Management Committee. He also served for seven years on the research staff of the Federal Reserve in Washington, D.C. Berner is a member of the Economic Advisory Panel of the Federal Reserve Bank of New York and the Panel of Economic Advisers of the Congressional Budget Office. He is also a member of the Executive Committee and a director at large of the National Bureau of Economic Research. In 2007, he received the William F. Butler Award for excellence in business economics. Berner earned his bachelor's degree at Harvard College and his Ph.D. at the University of Pennsylvania. He researched his dissertation under SSRC-Ford Foundation grants at both the University of Louvain, Belgium, and at the University of Bologna, Italy.

**WILLIAM KURT BLACK** is an associate professor of economics and law at the University of Missouri–Kansas City. He taught previously at the LBJ School of Public Affairs at the University of Texas at Austin and at Santa Clara University, where he was also the distinguished scholar in residence for insurance law and a visiting scholar at the Markkula Center for Applied Ethics. Berner was executive director of the Institute for Fraud Prevention from 2005 to 2007. He has also held positions as litigation director of the Federal Home Loan Bank Board, deputy director of the FSLIC, senior vice president and general counsel of the Federal Home Loan Bank of San Francisco, and senior deputy chief counsel, Office of Thrift Supervision. He is a former deputy director of the National Commission on Financial Institution Reform, Recovery, and Enforcement. Black's regulatory career is profiled in Chapter 2 of N. M. Riccucci's 1995 book *Unsung Heroes*, and Chapter 4 (“The Consummate Professional: Creating Leadership”) of *The Professional Edge*, 2004, by J. S. Bowman et al. Economist and Nobel laureate George Akerlof called Black's book *The Best Way to Rob a Bank Is to Own One*, 2005, “a classic.” Black developed the concept of “control fraud”—frauds in which the CEO or head of state uses the company or nation as a “weapon” of fraud. Control frauds cause financial losses greater than all other forms of property crime combined. Black recently helped the World Bank develop anticorruption initiatives.

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These proceedings were prepared by

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