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EVOLUTION OF AN ECONOMIC CRISIS?: THE SUBPRIME LENDING DISASTER AND THE THREAT TO THE BROADER ECONOMY

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BEFORE THE

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EVOLUTION OF AN ECONOMIC CRISIS?: THE SUBPRIME LENDING DISASTER AND THE THREAT TO THE BROADER ECONOMY

WEDNESDAY, SEPTEMBER 19, 2007

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC

The Committee met at 9:37 a.m. in Room 216 of the Hart Senate Office Building, the Honorable Charles E. Schumer, and Vice Chair Carolyn B. Maloney, presiding.

Senators Present: Brownback and Schumer.

Representatives Present: Cummings, Hill, Hinchey, Maloney, and Loretta Sanchez.

Staff Members Present: Christina Baumgardner, Katie Beirne, Ted Boll, Barry Dexter, Stephanie Dreyer, Chris Frenze, Nan Gibson, Colleen Healy, Marc Jarsulic, Aaron Kabaker, Israel Klein, Michael Laskawy, Zachary Luck, Robert O'Quinn, Jeff Schlagenhauf, Robert Weingart, Adam Wilson, Jeff Wrase, and Adam Yoffie.

OPENING STATEMENT OF HON. CHARLES E. SCHUMER, CHAIRMAN, A U.S. SENATOR FROM NEW YORK

Chairman Schumer. The hearing will come to order. I'd like to welcome my fellow Committee members, our witnesses, and guests here today for this very important hearing on the impact of the subprime mortgage meltdown on the broader economy.

My colleagues and I on this Committee have been concerned for months about the dangers to the American economy as a result of widespread, unscrupulous subprime lending, and the economic news in the last 6 months has disappointedly confirmed those fears.

Despite all the reassuring statements we've heard from the Administration that the impact of this mess would be, quote, "contained," it hasn't been contained but has been a contagion that has spread to too many sectors of the economy.

We've seen it most clearly in the financial markets. This summer's credit crunch was, in large measure, attributable to the collapse of the U.S. subprime market.

It shook Wall Street and required the emergency intervention of central banks throughout the world to restore liquidity to international credit markets.

The news outside the financial markets, while not so stark, hasn't been much better. We all saw the anemic jobs report. For the first time in 4 years, the economy actually lost jobs.

Consumer spending, the engine behind much of recent economic growth, has begun to slow down. Most economists have already lowered their weak expectations about GDP growth even further, and for the first time in years, the R-word, recession, is being discussed far and wide as a real possibility.

And we know that the worst is still yet to come, as the riskiest subprime loans will begin to reset in a very weak housing market over the coming months.

This morning we heard that housing construction fell to its slowest pace in 12 years. The collapse in housing investment has already shaved nearly a full point off of GDP growth.

The inventory of unsold homes already stands at record levels. Builder confidence has sunk to record lows. In many parts of the country, real home prices have declined, on a year-to-year basis, for the first time since 1991.

If there is anyone left who doubted the repercussions of the subprime mess and the risks to the economy, they should look no further than what the Federal Reserve Open Market Committee did yesterday.

In March, Chairman Bernanke came before this Committee and told us that the problems in the subprime market would have little or no impact on the overall economy. Yesterday, the Federal Reserve cut the Federal Funds Rate by 50 basis points, again, primarily in response to the fallout from the subprime crisis and its ramifications.

When a conservative Fed drops the interest rate this much, it's obvious they believe the economy is in trouble, and while yesterday's rate cut is a welcome indication that the Fed realizes the real risks to our economy, it's important to recognize that a half-point reduction will do little to get at the deeper underlying problems of our overall economic health, particularly the mortgage markets.

It is a temporary solution to a bigger problem and one that must be applied infrequently and with caution. My concern, and the reason we've called this hearing, is that despite all the bad news, despite the sudden calls for action from those who just a few short months ago were assuring us there was little to worry about, I fear that many here in Washington still don't appreciate the seriousness of the problem we are facing.

Our policy responses are not matching the magnitude of the risk that still lies ahead. And what, exactly, does lie ahead?

An estimated 1.7 million foreclosures are predicted to occur in the next 2 to 3 years, due to adjustable-rate mortgages resetting to unaffordable rates.

The Center for Responsible Lending has predicted that subprime foreclosures will lead to a net loss in home ownership and a cumulative loss of $164 billion in home equity. The lost property values from the spillover effects of these foreclosures could reach up to $300 billion in neighborhoods across the country, and lost property tax revenues alone could exceed $5 billion.

These alarming statistics just refer to the direct impact of the crisis. The indirect consequences, such as risks to our broader eco-

nomic growth, household wealth, the health of our financial markets, and our relationship with global markets, are still unknown.

I hope that today's hearing will at least serve to clarify some of the dangers of the cloud on our economic horizon.

One of the gravest dangers we face, as we will hear from Professor Shiller, is that we're witnessing the bursting of a speculative bubble in the housing market that will impact all families, not just subprime borrowers.

If, as Professor Shiller suggests, significant real nationwide housing price declines are on the horizon, we face the very real possibility that the housing market could drag the economy down with it.

Our country simply can't afford a slowdown in economic growth. When income inequality is at historic highs, deficits are looming, and investments in critical infrastructure are drying up, economic growth is our best hope for righting past policy wrongs and getting our country back on track.

Despite all of this bad news, the good news is that workable solutions are out there and we have time to put them in place to limit the damage.

First, we need to do everything we can to arm the local housing nonprofit groups that are working around the clock with subprime borrowers. Last week, with help of Senators Brown and Casey, we secured $100 million in foreclosure prevention funding, targeted to the local nonprofit groups that are pivotal in bringing subprime borrowers and lenders together, to achieve loan workouts.

I've asked both the Administration and the main private market players in the subprime market, to help us find more funding to channel to these nonprofit groups, particularly caseload grows more and more each day.

Second, we must use the Federal Housing Administration, Fannie Mae, and Freddie Mac, to strategically target relief to subprime borrowers.

As we all know, government-backed products, FHA-insured mortgages, Fannie- and Freddie-guaranteed loans, are the only game in town in terms of providing liquidity to the mortgage markets, and safe, sustainable products to subprime borrowers.

And while my colleagues and I on the Senate Banking Committee, expect to pass an FHA modernization bill today, that will help thousands of families keep their homes, we can and must do more with these critical tools that we have in our arsenal, to assist more of the 1.7 million families who are at-risk homeowners.

That's why I've introduced two bills—sorry. That's why I've introduced a bill 2 weeks ago, the Protecting Access to Safe Mortgages Act, that will temporarily lift the limits on Fannie's and Freddie's mortgage portfolios by 10 percent, which will free up $145 billion for the purchase of new mortgages.

The unique part of this bill, is that it requires that half of this total go directly to refinance mortgages for borrowers who are stuck in risky adjustable-rate mortgages.

And that's because I believe that targeting the borrowers that are likely to default, will help shore up the housing market, in general, and assist the broader credit markets and the economy as a whole.

This morning, OHFEO announced—that's the regulator of Fannie and Freddie—this morning, OHFEO announced that it will adjust Fannie Mae's portfolio cap upwards by only 2 percent a year, after ideologically opposing a cap increase over the past several weeks.

Now that OHFEO has put its toe in the water, it's time for it to jump in. Whatever they call it, there is no doubt that this is an increase in portfolio caps that I and others have been calling for.

This small increase, however, doesn't respect the magnitude of the crisis. Hopefully, the ideologically-driven and rigid opposition to raising caps, is about to fade.

We all need to work together to adopt common-sense measures that can go a long way to help make safe, affordable refinancings possible for tens of thousands of Americans trapped in the subprime mess, that never needed to be in it in the first place.

In short, I truly hope the White House is paying close attention to this crisis, because we're far from solving it, and I hope that this hearing will draw more attention to the real economic risks that still lay ahead, and what policy actions can be taken to curb the damage.

[The prepared statement of the Chairman Schumer appears in the Submissions for the Record on page 41.]

Without further delay, let's get down to business, so we can proceed quickly to the witness testimony. We in the Senate have some votes. We'll allow our House colleagues, of course, to continue, while those votes go on.

I would ask that we limit opening statements to the Committee's Senior Republican Senator—that's Senator Brownback, and I'll reserve time for him when he comes—and to Vice Chairwoman Maloney. We will, of course, enter everybody's opening statement into the record.

Chairman Schumer. Without further ado, let me call on my friend and colleague, Carolyn Maloney.

OPENING STATEMENT OF HON. CAROLYN B. MALONEY, VICE CHAIR, A U.S. REPRESENTATIVE FROM NEW YORK

Vice Chair Maloney. Good morning. I want to personally thank Chairman Schumer for his great leadership as New York's Senior Senator, in so many ways and in this subprime crisis situation, and for holding this hearing to examine the subprime lending disaster and the threat to the broader economy.

Anxiety over the state of the economy remains high, as concerns mount that the subprime mortgage meltdown will infect the rest of the economy.

Yesterday, RealtyTrac released the latest bad news, that foreclosures reported in August, increased 36 percent since July and 115 percent since this time last year. Expectations are the next 18 months will be even worse, as many subprime loans reset to higher rates.

The credit crunch, the worsening housing slump, market volatility, and weak consumer confidence, point to a gathering storm that could drag down the economy, taking thousands of American jobs with it.

Consumer spending has been propping up the economy, but the ability of American consumers to keep spending, may be flagging with slowing or declining home prices, putting the economy at a serious risk of a downturn.

Dr. Shiller worries that the collapse of home prices that we will see, and I quote, "might turn out to be the most severe since the Great Depression," end quote.

Millions of Americans are in danger of losing their homes, and if employers continue to pull back on hiring, their jobs may be in danger too.

In a clear sign of the seriousness with which the Fed now views economic conditions, yesterday the Committee moved to lower its key short-term interest rate by 50 basis points to 4.75 percent, and left the door open to additional cuts.

The Fed's action is an effort to prevent the economy from derailing, and to ease credit pressures, but it is no silver bullet. In Congress, we are focusing on helping families stay in their homes, and preventing another crisis like this in the future.

Just yesterday, the House of Representatives passed legislation to enable the FHA to serve more subprime borrowers at affordable rates and terms, attract borrowers who have turned to predatory loans in recent years, and offer refinancing to homeowners struggling to meet their mortgage payments.

Senator Schumer has taken several important steps. The $100 million that he's put in the budget, is very important to help people stay in their homes.

Also, Fannie and Freddie are providing much needed liquidity in the prime market right now. We passed a GSE Reform Bill in the House, but we should also raise the cap on these entities, which the Senator has called for repeatedly, on their portfolio limits, at least temporarily, so that they can provide additional liquidity and help with the subprime crisis.

To make servicers more able to engage in workouts, another action that we took in Congress, for strapped borrowers, we pushed FASB to clarify that its Standard 104 allows for modification of a loan when default is reasonably foreseeable, not just after default. They believe that will help keep many people in their homes.

And I think we should also eliminate the tax on debt forgiveness, sparing families the double whammy of paying taxes on the lost value of their homes.

For the future, our regulatory system is in serious need of renovation to catch up with the financial innovation that has surpassed our ability to protect consumers and hold institutions accountable.

Even though the Federal banking regulators have put out interagency guidance on subprime loans to improve standards, some three-quarters of the subprime market does not have a Federal regulator. We need to extend the guidance to create a uniform national standard to fight predatory lending and a single consumer protection standard for the entire mortgage market.

I believe regulating the brokers and other unregulated participants, is an essential first step. Shoring up the foundation of the American dream will help families and strengthen the economy.

I thank the Chairman for holding a series of hearings on this important issue, and I look very much forward to the testimony from our distinguished panel.

[The prepared statement of Vice Chair Maloney appears in the Submissions for the Record on page 48.]

Chairman Schumer. Thank you for your excellent testimony, Congresswoman Maloney, and when Senator Brownback arrives, we'll make room for his opening statement.

But now we'll turn to the witnesses. We want to thank every one of them. It's a very distinguished and knowledgeable, and, I would say, timely panel, given everything that's going on.

So let me introduce all four, and then we'll ask each of you to make your statements.

On my left, is Dr. Peter Orszag. He's been Director of the CBO, the Congressional Budget Office, since January of 2007.

Before joining CBO, Dr. Orszag was the Joseph A. Peckman Senior Fellow and deputy director of economic studies at Brookings. While at Brookings, he also served as director of the Hamilton Project, director of the Retirement Security Project, and co-director of the Tax Policy Center.

He has co-authored numerous books, and his main areas of research include: Macro economics, tax policy, and budget policy.

Dr. Robert Shiller is one of, if not the leading expert on the economics of housing in America. He is the Stanley B. Resor Professor of Economics in the Department of Economics at Yale University, and a fellow at the Yale School of Management's International Center for Finance.

Dr. Shiller has written extensively on financial markets and innovation, behavioral economics, macro economics, and on public attitudes, opinions, and moral judgments regarding markets.

He currently writes a column, Finance in the 21st Century, which is published around the world.

Dr. Martin Eakes is the CEO and co-founder of Self Help, a community development lender that's provided $5 billion in financing to more than 50,000 home buyers, small businesses, and nonprofits.

He's also the CEO of the Center for Responsible Lending, a research and policy center that works to protect home ownership and family wealth. To date, the Center for Responsible Lending has helped American families save more than $4 billion annually.

He's also a nationally-recognized expert on development finance.

Finally, last but not least, Mr. Alex Pollock of the American Enterprise Institute, has been a resident fellow there since 2004, focusing on financial policy issues.

He previously spent 35 years in banking, including 12 years as president and chief executive officer of the Federal Home Loan Bank of Chicago, while also writing numerous articles on financial systems and management.

Mr. Pollock is a director of the Allied Capital Corporation, the Chicago Mercantile Exchange, the Great Lakes Higher Education Corporation, and the International Union for Housing Finance.

Without objection, each of the statements will be placed, in their entirety, into the record. We would ask each witness to take no more than 5 minutes, so that we can have time for questions.

Dr. Orszag, you may begin.

STATEMENT OF HON. PETER R. ORSZAG, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Director Orszag. Thank you very much, Chairman Schumer, Vice Chair Maloney, members of the Committee.

My testimony this morning covers three principal topics: First, it examines the boom and then the bust in the housing market.

As Figure 1 shows, the home ownership rate varied within a narrow range from the 1960s to the mid-1990s, but then increased from about 65 percent in 1995 to about 69 percent in 2006.

The housing boom stemmed from three main factors. First, low interest rates spurred demand for houses. Second, home buyers' expectations of continued and rapid home price inflation, played a central role in propelling prices upward; that is, if people believed that prices would rise, demand for homes increased, which then put upward pressure on prices. Thus, the expectation of higher prices can become a self-fulfilling prophecy in the short run.

As Professor Shiller and others have noted, to the extent that underlying fundamentals are reflected in rental prices, however, the ratio of housing prices to rent may provide insight into the degree to which prices are diverging from underlying fundamentals.

That ratio tended to vary within a relatively narrow range between 1975 and 1995, before climbing steeply between 1995 and 2005.

A third factor in the housing boom was the plentiful supply of credit, which manifested itself most dramatically in the expansion of the subprime mortgage industry.

As has become apparent, the underwriting standards of some originators in that market slipped, especially over the past couple of years. Those problems fundamentally stemmed from a failure to provide the right incentives and oversight of originators.

In the traditional form of mortgage financing, the originator of the loan also holds the loan in its portfolio, and therefore has a very strong incentive to learn about the borrower's ability to repay.

By contrast, in the securitized form of mortgage financing, the originator sells the mortgage to a third party and earns a fee for origination, but receives little immediate reward for discovering relevant information about the borrower.

As a result, the originator may not have adequate incentives to exercise care and discretion in its underwriting, unless the ultimate purchaser or the entity providing the securitization, carefully structures such incentives.

Some borrowers may also not have understood the complex terms of their mortgages. As Ned Gramlich asked in a speech that was delivered on his behalf just before he died, why are the most risky loan products sold to the least sophisticated borrowers?

Over the past 2 years, prices have softened and problems in the subprime market, in particular, have become apparent. Although markets have weakened throughout the country, the increase in foreclosure rates has been concentrated in a few States, which are highlighted in red in the graph.

The second major topic of my testimony is the macro economic consequences of the problems in the mortgage market. There are

four main channels through which problems in the mortgage market can spread to the rest of the economy:

First, reduced housing investment. Between 1995 and 2005, investment in residential housing directly contributed an average of 0.3 percentage points to economic growth. The slump in residential housing has already weakened the economy and more weakness in the housing market could constrain growth further by reducing that source of investment.

Second, less consumer spending could occur, because of a reduction in housing wealth. Lower housing prices, reduce housing wealth, which, in turn, reduces consumer spending.

We have estimated the impact of a potential 20-percent decline in housing prices, and these first two channels, if such a dramatic decrease in housing prices were to occur, would reduce growth over the next 2 years, by somewhere between a half and 1.5 percentage points per year.

So that would slow the economy significantly, but not tip the economy into recession.

There are, however, two other factors at play, two other channels: First, contagion in financial markets, the broader spillover or contagion of the subprime mortgage markets into other credit markets, which can impair economic activity through reducing business investment, in particular.

To date, the increase in risk spreads has been concentrated in high-yield bonds, and it is worth noting that the increase that has occurred has returned the pricing of risk, even on those bonds, to somewhat more normal levels, after a period in which they were very, very low.

There's been less of an increase in risk spreads for higher-rated bonds.

A fourth channel that could possibly occur, is a decline in consumer and business confidence, which could also slow economic activity as a result.

The first two channels reduce investment in housing, and the wealth effects are easy to quantify, and they suggest slowing of the economy, but not tipping into recession.

The other two channels depend fundamentally on perceptions among investors, businesses, business executives, and consumers, and are therefore harder to pin down, because perceptions are—it's like you're trying to predict what other people are predicting.

Nonetheless, the best available evidence suggests that while the housing slowdown will slow the economy and the risk of recession is elevated, the most likely scenario is continued economic growth. That, for example, is reflected in the Blue Chip economic forecasts that were released in early September.

Even the average of the bottom ten forecasts in that survey suggested 2.0-percent real growth in 2008, and not a single forecaster projected negative growth for the year.

So the risk of recession is elevated, but the most likely scenario, at least at this point, seems to be continued economic growth.

My testimony also covers policy proposals that could address the financial difficulties in the subprime market, but, in the interest of time, I will leave that for your questions. Thank you very much.

[The prepared statement of Director Orszag appears in the Submissions for the Record on page 48.]

Chairman Schumer. Thank you, Dr. Orszag. Dr. Shiller?

STATEMENT OF DR. ROBERT J. SHILLER, STANLEY B. RESOR PROFESSOR OF ECONOMICS, YALE UNIVERSITY

Dr. Shiller. Thank you, Mr. Chairman and members of the Committee. In my testimony, I wanted to reiterate the fundamental importance of the unwinding of the housing boom.

Senator Schumer, you quoted some alarming statistics, and I heard numbers in the hundreds of billions, but if we look at the prospective loss in value of homes in this country, it's actually in the trillions. We have seen, after an 86-percent increase in home prices, we have seen a 6.5-percent loss.

If you could show my Figure 1, we've seen a huge boom and a decline since then of about 6.5 percent. That's the blue line on the figure.

The futures markets at the Chicago Mercantile Exchange, are predicting another 4- to 10-percent decline in major cities in the U.S. over the next year. If you correct this for inflation, we're talking about a 13 percent to 20 percent in real value that's already in the market, for a year from now.

And with $23 trillion in real estate value, that's trillions of dollars of losses. That's the fundamental thing that will drive it.

It will offset balance sheet, it will upset lots of our economic institutions.

Representative Sanchez. Mr. Chairman?

Chairman Schumer. We have these charts.

[The referenced charts appear in the Submissions for the Record on pages 73–74.]

Representative Sanchez. We can't see what chart you're pointing to.

Dr. Shiller. It's behind you there.

Representative Sanchez. Oh, OK, thank you.

Dr. Shiller. The chart also shows real—everything is in real inflation-corrected terms. In addition to price, it shows the real rent from the Consumer Price Index, and real building costs.

It shows that the price increase that we've seen since the late 1990s, is not warranted by either costs or rent.

Now, if you recall, the appraisal industry uses three methods of appraising homes: There's the comparable sales approach; the cost approach; and the income approach. We're seeing a big divergence.

The comparable sales approach has shown a big increase, but the others, if done properly, would not have shown such a price increase, so I think there's been a problem that we're mis-valuing our homes.

The declines that you can see already beginning, on the chart, are down 6.5 percent in real terms since the peak in 2006. If follows past patterns, it has a good chance of continuing.

Home price recessions tend to last years, as you can see from the last chart. In the last recession, which peaked in 1989—same chart—it bottomed out 7 or 8 years later, with a total decline of 15 percent, in real terms.

This time, we're in a bigger boom and we face the possibility of a bigger decline. It's not just an issue of a recession coming up; it's an issue of a drag on the economy that might extend over many years.

The credit crisis that we've seen, is one reaction, but we're still early in the possible declines in home prices, so we can expect more surprises like that.

So, if I go to the next chart, residential investment—that's investment in homes and apartment buildings and improvement—has been an important part of the business cycle in this country, going back to World War II. You can see that just about every recession in—the recessions are shown on the chart as this area between the parallel vertical lines. Those are NBER recessions.

You can see that the red line, which is residential investment, as a fraction of GDP, peaked and then dropped before just about every recession that we've seen.

And note that the recent peak and drop, is entirely comparable to what we've seen before recessions.

You can also see on that chart, that it shows, with the blue line, the Federal Funds Rate, the real Federal Funds Rate, and you can see that it seems like it's more housing than the Fed that has been responsible for past recessions.

It's very much a housing cycle, and it looks to me that the probability of a recession, given other factors, like the rising oil prices we've just seen, has a probability of maybe over 50 percent in the next year.

Finally, I think that looking back at the issue that home ownership is something that has been rising in this country and it's especially important that we maintain incentives for home ownership among low income minority people in a time with rising income inequality, maintaining a sense of participation in the economy that home ownership provides, is a very laudable aim.

And so I think that—one problem with the boom, is that the price increases that we've seen, are relatively, according to the S&P Case-Shiller indexes, produced by FiServe, Inc., are relatively concentrated in low-priced homes, which suggests that it is the subprime lending that is a factor in producing the housing boom, and it also suggests that low-income people will be especially hard hit by the correction.

So that means that I think that it is very important that we help—get some help for these borrowers, especially the borrowers who got into trouble because of some problems with our lending institutions, so, the FHA and the GSEs should be encouraged to help low-income borrowers.

I also endorse Elizabeth Warren, who's a Harvard Law Professor, her proposal for a financial products safety commission, modeled after the Consumer Product Safety Commission, so that we would have a government agency whose duty is to protect consumers in the mortgage market.

We also, I think, need some appraisal reform. The last major decline in housing prices in this country, was in the 1930s, and that brought us the Appraisal Institute, which is a professional organization.

I think, though, they need to be put under somewhat more pressure at this time, to review how appraisals are done and rethink whether the appraisal industry could help prevent another crisis like this.

Finally, I think there are other risk management products that need to be encouraged, like home equity insurance, shared equity mortgages, home price warranties, and down payment-insured mortgages that, in the future, might help risk to be spread more effectively, so that another crisis like this won't develop.

[The prepared statement of Dr. Shiller appears in the Submissions for the Record on page 71.]

Chairman Schumer. Thank you, Dr. Shiller. Mr. Eakes?

STATEMENT OF MARTIN EAKES, CEO, CENTER FOR RESPONSIBLE LENDING

Mr. Eakes. Chairman Schumer, Vice Chair Maloney and other members of the Committee, thank you for holding this timely hearing.

I am a lender. I've been making loans to low-income people to become homeowners for 25 years. We've financed $5 billions to 50,000 homeowners. We've never had more than 1-percent losses in a year.

If you have high losses, it means, as a lender, you're doing something wrong, not that the borrowers are wrong.

I've spent the last 8 years, trying to, starting with the North Carolina Anti-Predatory Lending Legislation, trying to stop the lending abuses that have been taking place in the subprime lending marketplace, which have cost millions of families already, their homes and the wealth that they have spent a lifetime building up in those homes.

I spend a lot of time in my written testimony, documenting subprime foreclosures, and that the problem is severe and real. Today, what I'd like to talk about, is more talking about solutions and recommendations. There really are two problems to solve:

The first problem is to make sure that we prevent abusive home loans from continuing in the future. The second problem is to deal with the existing borrowers who are trapped in subprime loans and face foreclosure immediately.

On the first issue, the Federal Reserve has promised that they will pass rules before the end of the year, that will address some of the continuing abuses in the subprime marketplace.

The most critical of those are the ability to repay for the borrower, to prohibit yield-spread premiums, which provide an incentive for mortgage brokers to put people into higher-cost loans; to prohibit prepayment penalties; to require escrows for taxes and insurance, and to somehow make lenders responsible for bad behavior of brokers.

If the Federal Reserve does not follow through on it promise, then you, Congress, need to take the authority that is given unilaterally to the Federal Reserve, and deploy it to another agency who will carry it out.

The second problem is the one I really want to spend more time on today, and that is the assistance to the 6.7 to 7.5 million families who have subprime loans as of the beginning of this year.

The first thing I want to do, is break down the categories of those borrowers: Of that 7 million, roughly 40 percent are borrowers who could be refinanced into a prime loan that would be stable, fixed-rate, going forward.

The next 20-percent slice, are borrowers who could stay in their homes, if the ARM loan they have, which will explode in payment amount within the next 12 to 18 months, simply continued the payment that they started with for the first 2 years.

The next 20 percent of these borrowers, will need an adjustment in their interest rate that lowers the overall monthly payment. They can't afford even the payment they had for the first 2 years.

The final 20 percent are two groups: Ten percent that are speculative and investor properties. No one really is worried about the policy ramifications there. They're going to lose those houses.

The bottom 10 percent, are those homeowners who really should have never gotten a home loan to begin with, and sadly, there are families in that situation.

There's not a lot we can do there. What we're really going to be trying to do, is trying to ameliorate the effects of those foreclosures, by having municipalities be able to purchase properties and redeploy them in some sort of lease-to-purchase structure to get them back into circulation.

Each of these five categories have different policy responses that are required.

The second thing I want to talk about, is the spillover effect in neighborhoods, because, often, this is overlooked.

It is true that for every foreclosure, the lender and/or the family, will lose somewhere between $50,000 and $80,000 on an average $200,000 subprime mortgage loan.

But that really is just a small part of the problem. I a study in Chicago, in low-income homeowner neighborhoods, roughly 1.5 percent is lost in value for every one of the neighbors within a one-eight mile radius of the foreclosure.

So what we're saying, is that for every foreclosure that occurs, the 50 houses that surround that foreclosure, will lose $3,000 in value, each. When you add that up, that's $150,000 of losses for the neighbors, who obviously did nothing wrong, other than trying to live in a neighborhood and pay their home loan on time.

This will be utterly catastrophic. We can talk about whether it will be a national recession or not. I tend to think we will have one.

But I can tell you that in the neighborhoods where I have worked for the last 25 years, it will be utterly a depression. If you've been to Cleveland or Detroit or to the suburbs of Charlotte, or neighborhoods that have low- or modest-income homeowners that had a predominance of subprime loans, it will be utterly catastrophic, the devastation, when you have 10 or 20 homes that are boarded up in a very small, concentrated area.

What are the solutions: The first solution that I and many others have worked on for the last 9 months, is to work with loan servicers to modify the subprime loans that are currently exploding payments as we speak.

We have pretty much solved the problem of the authority that the loan servicers have, the accounting issues, and the tax issues.

Those were really major thorny issues that came up, but they've all been resolved.

But for whatever reason, the loan modifications are not taking place in any appreciable magnitude, so we still have 100,000 to 150,000 foreclosures each and every month, being initiated, and for the next 12 to 18 months, we will see a level of foreclosures that we have not seen in decades and decades, and maybe all the way back to the Great Depression.

I think we have to do two additional things, in addition to working with loan servicers. The first is, we need to delete from the Bankruptcy Code, an exception that makes personal residences the only asset that cannot be protected in a Chapter 13 bankruptcy.

So if you're rich enough to have a loan for a second home or a vacation home, for investment real estate, a vacant lot, a boat, or an RV, every one of those loans can be adjusted in bankruptcy, to the current market value of that asset, and the terms of the loan can be modified.

But, ironically, the only asset that cannot be so adjusted in bankruptcy under Chapter 13, is a loan against your personal residence. It makes utterly no sense whatsoever.

Finally, Congress should provide $1 billion of funding. The $100 million is a wonderful start to provide legal representation to the borrowers who are facing foreclosure. For $2,000 per borrower, you can save that family.

It's not a bailout, because the investor is going to take the loss on these loans, either way. All it does, is, it says, let's have that loss be in an orderly, transitional way that does not destroy the neighbors living around that house.

I know that elections are around the corner and we've got a short window to get something done. I urge you to join together and pass these common-sense solutions before it's too late. There really are hundreds and hundreds of thousands of people who will lose their homes immediately, if we don't act soon.

[The prepared statement of Mr. Eakes appears in the Submissions for the Record on page 110.]

Chairman Schumer. Thank you, Mr. Eakes. Finally, Mr. Pollock?

STATEMENT OF ALEX J. POLLOCK, RESIDENT FELLOW, AMERICAN ENTERPRISE INSTITUTE

Mr. Pollock. Thank you. Mr. Chairman, Vice Chair Maloney, members of the Committee, as others have said, the best way to understand the severe mortgage and housing industry problems we're experiencing, is to look at them as the deflation of a classic credit-inflated asset bubble.

Because residential mortgages represent so large a credit market and so large a component of total debt, and residential real estate such a huge asset class, about a $21 trillion asset class, and, therefore, a large component of household wealth, the effects of a deflating bubble on macro economic growth are sizeable and significant, of course, in a negative direction.

In addition to monetary policy and the actions we've seen recently, possible political responses can include temporary programs

to bridge the impact of the bust and reduce the risk of a housing sector debt deflation.

For the future, we can also take steps to fundamentally improve the functioning of the mortgage market. Here I have simple, but, I think, a very powerful proposal, which is a one-page mortgage disclosure which tells borrowers what they really need to know about their mortgage loan, in a clear and straightforward way, this to better protect themselves and also to make the market more efficient.

Typical estimates of credit losses involved in the subprime mortgage bust are about $100 billion. That's the credit losses. It doesn't count the losses in market value of securities.

A year ago, it was common to say that while house prices would periodically fall on a regional basis, they couldn't do so on a national basis. Well, now house prices are falling on a national basis. With excess supply and falling demand from the credit constraint, it's not difficult to arrive at a forecast of further drops in house prices.

A recent Goldman Sachs forecast, for example, projects average drops of 7 percent per year through 2008.

Now, this kind of house price decline, as others have pointed out, would mean a large loss. Fifteen percent would be a $3 trillion loss of wealth for U.S. households, which would, of course, be especially painful for those who are highly leveraged, and would certainly put a crimp in cashout refinancing, and home equity loans. It will certainly negatively impact consumption, although, as Peter said, because we're talking about behavior, to make precise forecasts is difficult.

But the deflation of a bubble centered on such large stocks of debt and assets always causes serious macro economic drag.

On the subprime sector itself, we ought to point out that subprime is actually about half and half—53 percent adjustable-rate loans; 47 percent fixed, according to the Mortgage Bankers Association numbers.

The serious delinquencies on subprime fixed-rate loans are not too different from those on FHA fixed-rate loans, so we can really focus the problem on the subprime ARMs, where the serious delinquencies are much higher, about 12.5 percent in the latest numbers.

Now, to try to bridge the bust and ameliorate a possible downward debt-house price cycle, President Bush, numerous Members of Congress, and the FHA itself, have suggested using the FHA as a means to create refinancing capability for subprime mortgages.

In my view, this makes sense, because the FHA itself is and has been since its creation in 1934, a subprime mortgage lender. That's what it's there for.

We see it, for example, in total FHA delinquencies, which are about 12.5 percent. That compares to about 14.5 percent in the subprime market.

But I believe a special program, in which the FHA could refinance 97 percent of the current value of a house, and the investors would accept a loss on any difference between that and the principal owed, would be distinctly preferable to foreclosure for investors, as well as, obviously, for borrowers.

That's the test we have to meet to make it possible for the mortgage servicer to fulfill its fiduciary duty, which runs to the investors. The deal has to be better for both sides, and I think we could create that.

Regarding Fannie and Freddie, I do not favor an increase in the conforming loan limit, but I do favor granting Fannie and Freddie a special increased mortgage portfolio authorization. However, this should be strictly limited to a segregated portfolio solely devoted to refinancing subprime ARMs.

In my view, such a special authorization might be for $100 billion each. I've got a bigger number than you do, Mr. Chairman.

This should include the ability for them to purchase FHA-insured subprime ARM refinancings. That way, you get two channels of funding, one through Ginnie Mae and one through Fannie and Freddie for the special FHA program.

Finally, it's essential to a market economy, based on voluntary exchange, that the parties understand the contracts they're entering into.

A good mortgage finance system, in particular, requires that the borrowers understand how the loan will work, and especially how much of their income it will demand. Nothing is more apparent than that the American mortgage system is a failure in this respect.

Instead of what we have, which is highly confusing to all borrowers, not only subprime borrowers, but also prime borrowers, the key information should be stated in a simple and clear way, in regular-size type, and presented from the perspective of the commitments the borrower is making and what that means for the demands on household income.

To achieve this, I propose a one-page form, which we call "Basic Facts About Your Mortgage Loan", which accompanies my testimony. All borrowers, in my view, should have to receive this well before the closing.

You can actually get the key information on one page. It wasn't easy, but you can do it.

I believe that the mandatory use of such a form would help achieve the required clarity, make borrowers better able to protect themselves by understanding what the mortgage really means to them, and, at the same time, promote a more efficient mortgage finance system.

In my view, this is a completely bipartisan idea, and along with other things we may or may not do, I think we should implement this form or something very much like it. Thanks very much for the opportunity to be here.

[The prepared statement of Mr. Pollock appears in the Submissions for the Record on page 141.]

Chairman Schumer. Thank you, Mr. Pollock. I'm glad you're all here. I thought these were four excellent testimonies and I recommend that people read them all. Time limited us.

What we're going to do here—Senator Brownback came, but he's going to get an extra time to make an opening statement when he does his questions, so I'll ask questions first, and then we'll go to Congresswoman Maloney, who will take over chairing the hearing at 10:30 when the Senate vote occurs, and then we'll go to Senator

Brownback, if that's OK. And if he needs—if Senator Brownback needs to go first because of the vote, that's OK, too.

Senator Brownback. We don't need to do that. Thank you very much, Mr. Chairman.

Chairman Schumer. OK, good. All right, first—and, actually, Mr. Pollock has addressed this—first, I think your idea of one page is excellent. I'm going to introduce something to that effect, and maybe ask one of my Republican colleagues to join me, since it is, as you say, a bipartisan idea emanating from the American Enterprise Institute.

Second, I'd like to ask, just quickly, the panel's opinion of the two proposals that I have made on this—one, more money for the—Mr. Eakes mentioned this. He thought $100 million was too little, but the basic concept of more money for the nonprofits to help people refinance.

There are two parts to this problem: One is the means of getting somebody to refinance, since most of the people who are stuck here, don't know how to do it, and—I can't remember if it was Dr. Orszag or Dr. Shiller who pointed out that the banker is no longer there in this securitized mortgage market, and then, second, some money for the refinancing.

On the first part, we have proposed money for the nonprofits, some of which would come federally, and, we would hope, some of the banks and financial institutions would chip in, as well.

Does everyone agree that that's a worthy thing to do? I don't need comments, just a yes or no. Do you agree, Dr. Orszag?

Director Orszag. You don't want to ask me yes and no questions on policy matters.

Chairman Schumer. I know.

Director Orszag. But outside analysts have proposed using community-based organizations as a very effective tool in this kind of setting.

Chairman Schumer. Right. Dr. Shiller, you agree? You nodded your head.

Dr. Shiller. Yes.

Chairman Schumer. Mr. Eakes proposed it, so he does.

Mr. Eakes. Yes, obviously, plus legal assistance.

Chairman Schumer. How about you, Mr. Pollock?

Mr. Pollock. I think this is a classic problem of information asymmetry, as the economists say, where one party knows a lot more than the other, and—I would see this program as making up for the past lack of a clearer disclosure.

Chairman Schumer. But you would be——

Mr. Pollock. So I think it makes some sense, right.

Chairman Schumer. Right. Second—and you talked about this, Mr. Pollock—raising the mortgage portfolio caps at Fannie and Freddie, and directing—we direct half, because we think they need some room here. You might direct all, Mr. Pollock, but the idea of raising the portfolio cap and directing a very significant portion of that increase to go to refinancing subprime mortgages in foreclosure or on the edge of foreclosure, Mr. Pollock clearly agrees. Do you agree?

Mr. Pollock. I agree, provided 100 percent goes to this. Fannie and Freddie are making plenty money on other things, Mr. Chairman.

Chairman Schumer. OK, fair enough. Mr. Eakes?

Mr. Eakes. I have never been in favor of portfolio caps, so I think that——

Chairman Schumer. And how about directing them to these markets?

Mr. Eakes. I think they should be directed, in that there should be standards to ensure that the same protections that currently apply to prime loans, such as no prepayment penalties, are also applied to the refinanced subprimes.

Chairman Schumer. Dr. Shiller?

Dr. Shiller. Well, Fannie and Freddie are important institutions promoting home ownership, and we need—they seem like a logical conduit.

Chairman Schumer. How about you, Dr. Orszag?

Director Orszag. That would have the effect of increasing demand for the mortgages and reducing the interest rate. I think there are some questions that people have raised about whether using an FHA-type of intervention is a more effective tool, but that's for you to evaluate.

Chairman Schumer. Well, let's get that. One of the big problems we face here, is who is going to do this? The people I've talked to who are in foreclosure, since there's no friendly banker around, there's an unfriendly mortgage broker, who, as you all pointed out, one way or another, has taken advantage of the mortgagor.

The lending institution is oftentimes not a bank, and they're off in the sunset. They've made their big fees and they're gone, and so the only person really left on the scene, is the mortgage servicer, which Mr. Eakes talked a little bit about.

And that mortgage servicer, just to inform everybody, does have to take the mortgage payment and sort of break it up into all the little pieces and send it to the various bond holders and securities holders who have the pieces.

Now, my question is this, and I direct it to Mr. Eakes, but ask anybody to chime in: Can we use these mortgage servicers, the present ones or new ones—and it's a lucrative business—to help with the knowledge gap we have in terms of refinancing.

You say it hasn't worked thus far, for reasons you didn't describe in your oral testimony. Could you talk a little bit about that, Mr. Eakes? This is an important missing piece of the puzzle.

Mr. Eakes. For 9 months, the banking regulators and Members of Congress, have been working to make modifications take place. The modification path becomes more and more important with every month that passes.

As property prices fall, refinancing becomes less and less available, because you can't refinance if your property is under water.

The three issues that were initially discussed, were that servicers didn't have authority to modify loans.

Chairman Schumer. Now they do.

Mr. Eakes. So there was great research looking at the servicing agreements of all of the agreements, and basically have now concluded that they do have the authority.

Chairman Schumer. Right

Mr. Eakes. The second issue was looking at whether it would violate the REMIC tax laws, and——

Chairman Schumer. And it does not.

Mr. Eakes. And there is great consensus that there is no problem there.

Chairman Schumer. Right.

Mr. Eakes. The final one, which was a little thornier, was the SEC FASB problem in accounting.

Chairman Schumer. And we worked on that and that's been solved.

Mr. Eakes. And that's been solved.

Chairman Schumer. So, why isn't it happening?

Mr. Eakes. OK, the two remaining problems: Number one, 50 to 60 percent of the subprime loans made in 2006, had piggyback second mortgages. You can't really get a resolution with a single servicer, if you have another loan outstanding.

The second mortgage holder has no interest in basically writing off their entire debt. They feel like, why not just leave my loan there and see if I can be a fly in the ointment and eventually get paid something.

So, for whatever reason, that structural reason, or just that it is legally easier and more protected for the loan servicer to foreclose, that is the path.

So a company like Countrywide, which has announced that it's actively doing modifications of loans, has in its most recent investor teleconference, admitted that virtually none of the so-called modifications, were, in fact, real modifications.

Chairman Schumer. Right.

Mr. Eakes. They were just simply payment deferrals.

Chairman Schumer. What do we do to correct that situation and allow the servicers—the servicer is the on-the-ground person best suited to do this, with some kind of incentive.

Mr. Eakes. So the first thing to note, is that we have a real absence of time. These loans that were made in 2006, are going to come due with the 50-percent payment shock, during the next 12 months.

Chairman Schumer. Right.

Mr. Eakes. If we don't act immediately, we're going to lose the chance, because somewhere around 70 percent of the borrowers who face this reset and aren't able to refinance, are going to be foreclosed. They can't make——

Chairman Schumer. And that is going to shock—I mean, that's going to shock the markets.

Mr. Eakes. It's going to shock. The foreclosures we see now, are just a—you know, it's a preview of what will come over the next 18 months.

Chairman Schumer. So you're saying that the only real solution, is the nonprofit solution, because the servicers either can't or won't?

Mr. Eakes. I think the primary solution, is doing this tweak to the Bankruptcy Code. It's a very small thing that would allow these loans to be modified after a hearing by a Bankruptcy Judge

in Chapter 13. In 2005, we encouraged borrowers who are having trouble, to go Chapter 13 and pay back their debt responsibly.

Chairman Schumer. Mr. Eakes, it's going to take a long time to get these hundreds of thousands of people into Bankruptcy Court.

Mr. Eakes. Well, the truth is, if you have the provision and anyone files, which they will, the Bankruptcy Court has built into it, two things that are very important:

First, it has an automatic stay that stops the foreclosure until the process can work its way through. That's really important.

The second is that in the Bankruptcy setting, when you have a writedown of a mortgage value, it's already determined that that will not create a taxable gain.

Chairman Schumer. Understood. I understand the legal. I think the practical problems are pretty large.

Mr. Eakes. I just think we must do this.

Chairman Schumer. I'll ask each of the people. This is the greatest nut here. I mean, we need new financing, but I think we're going to get that, one way or another. Maybe, if we go to 100 percent, as Mr. Pollock suggested, we might even get the Administration's support.

They have not objected to directing the money; they just don't want to raise the portfolio limit. So that's a possible compromise that we would explore.

I proposed 50 percent, and I've spoken to Secretary Paulson. He's not totally against this. I mean, I think he's constrained a little bit by the previous Administration's position.

But the real problem is, who is going to execute these? I've met some of the people in foreclosure, and they can't do it themselves. So it's the nonprofits, but Mr. Eakes said we need a billion dollars there, and unless we get some private-sector input—it was hard enough for us to get $100 million into this, Senators Casey, Brown, and myself.

I was hopeful that the servicers might do this, somehow or other, with some encouragement, some incentives, since they're on the ground. Old, existing servicers, or new ones. Mr. Pollock?

Mr. Pollock. If I could comment on the servicer issue, Mr. Chairman, I think the core issue there—of course, there are a number of issues—but the core issue is the fiduciary duty of the servicer or the agent. The servicer is actually an agent for the bondholders.

So the agent, the servicer, has a duty to do things which are in the best long-term interest of the bondholders. This is why I think there may be a meeting ground, if you had a readily available subprime ARM refinancing program, for example, through the government subprime lender, the FHA. It would be clear, even in the case where the price of the house is less than the mortgage—which if Professor Shiller's forecasts are right, will be a lot more common—where there's a ground where it's actually better for the investor to accept a refinancing and a haircut, but a haircut that will be much less expensive than foreclosure. As has been often pointed out, foreclosure is very expensive.

Chairman Schumer. There are a lot of investors to deal with each of these changes, because the mortgages are so split up.

Mr. Pollock. That's why the servicer has to be put in a position where it's clear that he's doing something that's in the benefit of the bondholder, as well as the benefit of the borrower, and finding that middle ground, which seems to me, is possible to do, is what we have to achieve.

Chairman Schumer. Would you want to comment on that, either Dr. Shiller or Dr. Orszag, on any aspect of the servicer conundrum here?

Dr. Shiller. I had to defer to Mr. Eakes for the—I'm impressed, though, that this is a very rapidly changing situation. I think some measures like those Mr. Eakes proposed, should be urgent.

Chairman Schumer. It is urgent, and we're not reacting urgently. And your economic forecast, Dr. Shiller, and everything that each of the other witnesses has said, says this ought to be on the front burner of the Administration and of the Congress, and I can tell you that it's not. Dr. Orszag?

Director Orszag. I would just add that, in addition to the community-based organizations and the FHA channels, one of the things that it is important to remember about the securitization process, is that we have not had as many problems in the conforming market, and the reason is because of the role of the GSEs in setting standards for the whole process.

So, one of the other effects that expanding the efforts or the activities of the GSEs into this market may have is to alleviate, over time, that incentive problem that is the trigger for a lot of this. But that, obviously, is not an immediate solution.

Chairman Schumer. Thank you. Well, my time has more than expired, so let me call on my colleague, Senator Brownback, to make an opening statement and do questions, and then Congresswoman Maloney will chair part of the hearing while we go vote, and my other colleagues will be able to ask questions. I'd like to return for a second round, if I can. Thank you.

Senator Brownback. Thank you, Mr. Chairman. I appreciate that. Thank you for holding the hearing. I just will put my full statement in the record, if that would be acceptable.

[The prepared statement of Senator Brownback appears in the Submissions for the Record on page 149.]

Gentlemen, I want to ask this from the basis of experience, and then I apologize that I missed your testimony. I had another engagement that I was at.

But I would like to ask then, if I can, some ways that maybe we can get at this. I went through the farm crisis in the early eighties, from the position of being a lawyer, from the position of being the Secretary of Agriculture in an agricultural state, and from seeing what government policies did to exacerbate it.

And my experience in looking back on that and applying it to this situation—and you tell me if it's the wrong way to look at it—was that we ended up having a situation where you had a lot of people that got overly financed, because land was inflating at 10 percent a year; people were borrowing off of that.

I remember being offered to allow to buy some land at 100-percent financing, because next year, it was going to be worth 10 percent more, and so this was all going to work out. I had that personal offer to me, so I know those sorts of things happen.

Then we had a bad spot in the market. Land prices started falling off, then the banks went out and said we've got to clean up all these bad loans, because the regulators were on top of them. I actually had a small bank I was representing, and, boy, we just—we had to go through the community and it wasn't pretty.

That put a glut of both land and farm machinery on the market, which then dropped those markets even further. I remember people saying, well, we had this big confinement facility, livestock confinement facility, and said, well, what do you think it's worth, when we were in these negotiating sessions.

And the lender held up zero. It's worth zero in this market, because the local market was so saturated.

And looking back on that, my answer in this situation, if it's similar, is that the key thing we have to do, is to try to prevent this thing from boiling over. It can slow boil for awhile, but the key thing that we need to do, is to try to string this out so that you don't get too much stock on the market too fast, so that the market itself can work this out—if we can maintain a decent overall economy, to where the overall economy is not dipping, that people can maintain some income, you may be able to slow boil your way through it.

But you need something that, instead of happening in 2 years, it needs to happen over 7 or 10, is my sense of this on the ground.

I don't know if that's your perspective or not. If it isn't, or if I'm wrong, I'd like to know that. If it is that, what are the key policy tools?

You probably have already covered this, but in a sentence or two, what are the key policy tools to allow us to be able to string this out further, so it doesn't just kill us on a local market basis and on a national market basis?

Mr. Pollock?

Mr. Pollock. I'll try to answer that, Senator. First of all, I think your description of the parallels between the farm boom and bust and this one, are exactly right. All financial booms and busts are different in detail, but exactly the same in general pattern. They all involve the over-expansion of credit, and then the contraction of credit. So that is exactly right.

Jesse Jones, who ran the Reconstruction Finance Corporation in the 1930s said, as you just did, the thing that troubled financial markets need is time for the values to sort out and to stop a threatened downward spiral of the kind you discussed.

I think the things we have been talking about using special refinancing programs of the FHA, or portfolios of Fannie and Freddie entirely limited to refinancing subprime ARMs, would be devices to do exactly what you are suggesting, Senator, which is to say——

Senator Brownback. And that's the primary tool that we would have available now.

Mr. Pollock. As something to, I call it bridging the bust; to do something that takes you on a bridge across the chasm that you might get into in a downward debt deflation—this time in the housing sector, obviously historically in all different sectors, including housing before.

Senator Brownback. I want to apologize to my colleagues because this is ground I am sure they have already heard covered,

but I would like to ask, Mr. Eakes, you think that one of the things we need to do is change the Bankruptcy Code. That was heavily used in that farm crisis, and we even put in a new chapter in the Bankruptcy Code for that.

Is that your primary answer?

Mr. Eakes. Well what I would say is that the comparison to the farm crisis is very similar, with one exception. The product on subprime home loans has a 40- to 50-percent payment jump in the third year, which is happening right now for the next 12 months.

So we do not have time to stretch it out over 4 or 5 years. If these borrowers, either through voluntary efforts by the loan servicers or through having a bankruptcy protection, do not get those payments adjusted, we will lose 2-plus million families, and the spillover effects will be enormous.

I do not see the voluntary action coming from the loan servicers any more than it did from the lenders in the farm crisis. It is just a tweak. It is an exception in the Bankruptcy Code now that says that personal residence loans are the only real estate loans—as you said, for farms, for business property, for second homes, you can protect that property by modifying the loan after a hearing by a bankruptcy judge.

If we do not have that, and soon, my prediction is we will lose these 2 million homes, and there is nothing we are going to do that will stop it.

Senator Brownback. Thank you very much.

Vice Chair Maloney [presiding]. Dr. Orszag wants to comment.

Senator Brownback. Oh, yes.

Director Orszag. I just wanted to add, I think we can think about the policy responses in three categories. There is stabilizing the macro economy, which is mostly the Federal Reserve's job.

There is helping vulnerable households, which is what most of this discussion has been about using FHA and community-based organizations, and what have you. And a balance needs to be reached there between helping vulnerable households at risk for reasons beyond their control, and the general principle that households bear the consequences of their own decisions within some reasonably foreseeable set of possibilities. And that is something you all need to balance.

Then a final category is preventing future crises. That involves things like changing, or perhaps expanding the laws against deceptive and other practices like the Home Ownership Equity Protection Act; possible changes to rating agencies; and regulation of the subprime market. Those things will not help existing homeowners but may help prevent future crises.

Senator Brownback. Chairman, thank you very much, and thanks to my colleagues for indulging me in going back through some things you had already covered. I appreciate it.

Vice Chair Maloney. Thank you. Thank you so much, Senator.

Dr. Shiller, you seem to think that there is a risk of an economic downturn within the next year, yet Dr. Orszag you seem to be saying that the economy will slow but probably not enough for growth to turn negative.

Can each of you explain what factors you think will contribute to or prevent an economic downturn?

Dr. Shiller. Maybe I can start.

Vice Chair Maloney. OK.

Dr. Shiller. Mr. Orszag is relying on an econometric model that looks at repercussions of the wealth effect that we are seeing. But I think that it is difficult for these models to represent unusual new circumstances, especially circumstances that effect the psychology of the market.

This is the biggest housing boom the U.S. has ever seen. In fact, it is not just the U.S. We need a world model, as well, because this housing boom has afflicted much of the world economy. And the unraveling of this boom will have repercussions abroad, and it will feed back into this country.

The real question is the effects on confidence and psychology, and how people interpret all of this, which I think is difficult to model. And so if you look at Dr. Orszag's results they are showing us on the margin of a recession.

So it seems to me that it is entirely consistent with what he has presented, that there is a significant risk at this time.

Director Orszag. If I could just add a few thoughts. First, we have to remember that there are some underlying drivers that are continuing to propel economic growth, including net exports, business investment, government spending, and other factors. So there is some underlying momentum to the economy.

I agree with Professor Shiller that the hardest part of analyzing the impact of the housing downturn is the perception related third and fourth channels I talked about: contagion in financial markets, and effects on confidence. That is just very difficult to evaluate.

What I would say is there does seem to be a bit of a disconnect between financial analysts and those on Wall Street and business executives and those on Main Street with somewhat more pessimism among the financial market players than among the real economy players. But any way you cut it, there is an elevated risk of recession.

The economic outlook is particularly uncertain right now, and my only point was that the most likely scenario is one of continued economic growth, acknowledging that again the situation is uncertain and the risks of a recession are elevated.

Vice Chair Maloney. Dr. Shiller, how much do you expect housing prices to fall over the coming year? And how much of a threat do these falling housing prices pose to the stability of the overall economy?

Dr. Shiller. Well the Futures Markets that are trading in Chicago are predicting, depending on the city, between 4- and 10-percent declines over the next year. I don't make forecasts, quantitative forecasts, but those sound like reasonable possibilities.

Vice Chair Maloney. And specifically do you expect that the lower housing prices will cause a significant slowdown or decline in consumer spending?

Dr. Shiller. Well the U.S. has a very low saving rate. I think one of the factors that has—virtually zero personal saving rate—and I think one of the factors that has encouraged this is the housing boom and people's perception that, what's the point of saving when my house is providing me new equity of, you know, it could be $20,000 in 1 year.

As this perception fades, I think it is quite likely that we will see declines in spending. And these are again things that are difficult to model based on historical data because we are talking about a major change in perceptions.

Vice Chair Maloney. And do you expect—and I would like Dr. Orszag also to comment on this—do you expect the lower consumer spending to be large enough to affect the overall economy, our economic growth, and our employment levels?

Dr. Shiller. I think it is likely to be a drag on the economy for years to come.

Vice Chair Maloney. How many years do you expect?

Dr. Shiller. I am saying a drag on the economy. I cannot—the last, the weakness in the housing market in the last cycle lasted 5 years. But this is not a catastrophe. This is——

Mr. Pollock. But there was not a 5-year recession.

Dr. Shiller. It was not a 5-year recession. The Fed has been very responsive to these things, and they will cut interest rates. I expect the 50 basis point cut we saw yesterday is likely one of a series of cuts. So we will see strong policy action. And recessions have been relatively short-lived, and I think we will get over it.

But even after the recession, if it comes, we may see attenuated growth for some time.

Vice Chair Maloney. Would you like to comment, Dr. Orszag?

Director Orszag. I would just add two things quickly. One is that this sector is likely to impose a drag on the economy for some extended period of time, and that is embodied in most projections at this point.

The second point is this: Another lesson I think we can learn from this experience is the fact that financial markets are not pricing some risk—in this case having to do with subprime mortgages—in no way means that that risk is not real.

The fact that financial markets are not pricing other risks like our long-term fiscal imbalance in no way means that the risks that we are running along other dimensions are not real. We face a severe and serious long-term fiscal imbalance that does not appear to be fully reflected in long-term bond prices, but that does not mean that all is well in the world from a fiscal perspective and that we are not running risks there.

Vice Chair Maloney. And very quickly, Mr. Pollock, on your financial statement on one page, if a borrower did not understand the underlying financial instrument, is it really likely that a form will do that much to help them?

Mr. Pollock. Yes, I think it is, Madam Chairman. Because unlike any other disclosure ever used in the history of American mortgages, the one I am suggesting actually focuses on the impact on the household finances.

We have had a lot of forms in the huge stack of papers we all know about at mortgage closings, but they are all devoted to describing the instrument in vast detail. And the result of that is that there is essentially zero real information.

What I am suggesting is a form which highlights notably the household income. Just in case you have lied about it, you get a chance to rethink. Or if somebody else has lied about it on your behalf, you get a chance to correct it.

And then the payments, including all the elements—principal, interest, insurance, and property taxes—and how much of your household income this loan is going to take up, both at its beginning rate, and if it has adjustable rates at its fully indexed rate.

We have never told in any straightforward way people. We rely on the brokers, or the loan officers to explain that. Obviously a lot of them are very diligent and responsible people, and some are not.

So I do think this could make a difference. I do not claim it would work in 100 percent of the cases, but I think it would work in a large amount. And I have had the most fun testing this informally on various people.

I think it would work. And I have had, out of the blue, responses from a number of loan officers who voluntarily adopted this for use with their clients because they think it works.

Vice Chair Maloney. Thank you. I want to thank all of you. I have been in many hearings on this issue, and you have really been the most informative with actual ideas of what we can do about it.

I want to thank you, and I yield to my distinguished colleague, Congressman Hill.

Representative Hill. Thank you, Madam Chairman.

You basically asked, Madam Chairman, most of the questions that I was going to ask. But, Mr. Pollock, I think you are the only one that did not comment on whether or not, in your view, we were going to move into a recession. Do you wish to comment as to whether or not you believe that to be a reality?

Mr. Pollock. Congressman, I confess to be fully agnostic as to the possibility of macroeconomics as a science. The reason is, as Dr. Orszag said, you are trying to model human behavior. And the human behavior is reacting to all of the things that are happening, including your forecast.

I do not think there is any question but that the bursting of a big bubble is a serious negative economic drag. Whether it is enough to put you over the line into negative growth, I do not know.

Representative Hill. OK. In listening to all the testimony, one thing that is bleeding through is that the subprime market—and correct me if I am wrong—according to the testimony that you have given, if there is going to be a recession, is going to be the reason why we are going to have a recession, the decline in that market.

Is that a fair analysis?

Dr. Shiller. The housing market, more generally. It's not just subprime. The housing market is going to continue to fall and bring more and more people in trouble. And it will affect confidence more generally.

Representative Hill. But it is the subprime market that is driving the decline in the overall market?

Dr. Shiller. Well that is the focal point right now, that's right.

Director Orszag. And the problems thus far have been disproportionately concentrated in the subprime market. For example, I showed you the increase in foreclosure rates by State. Those States were also the ones that had the highest shares of subprime mortgages extended.

So the connection that you are drawing seems to be one that is borne out by the data, that the problems seem to be disproportionately concentrated in the subprime market, and that that poses macroeconomic risk because of its implications for the rest of the housing market, and then for the rest of the economy.

Representative Hill. OK, Mr. Eakes, you say that many problems in the subprime market have been attributed to unscrupulous mortgage brokers. Then you went on to indicate that your Self-Help losses have been less than 1 percent.

I believe it was Mr. Pollock who indicated that the national foreclosure is at 14 percent?

Mr. Pollock. That's total delinquencies.

Representative Hill. Total delinquencies. And what is your foreclosure with Self-Help, Mr. Eakes.

Mr. Eakes. Our total losses have been 1 percent cumulatively, so it is well under 1 percent per year. We have had over a lifetime of loans probably 2 percent, 3 percent that have foreclosed. But the losses have been very small.

Representative Hill. OK.

Mr. Eakes. My statement about that is: If you do common-sense loan underwriting, what all bankers did 10 years ago, 15 years ago, you just do not get these problems. It is when you start adding practices like stated income that says to a borrower or to a broker you just get to state what your income is, and we will believe it.

Or, that you do piggyback loans that are larger than 100 percent of the value of the home at day one; or you put a prepayment penalty that says if you got stuck in a loan and you cannot get out, when you cumulate each of the risk factors it becomes really quite catastrophic.

Representative Hill. Well do you believe, then, that the market ought to take care of that? Or should we in Congress be passing laws that regulate how you are lending?

Mr. Eakes. There are two different markets that play here. One is the investor market, the funds that flow into mortgages. And the market will self-correct there. I mean, it is already correcting.

On the level of individual homeowners, the market is not going to correct for people who got sold a product they did not understand and got put in. They are going to lose their homes. If we call that "correction," it is a very harsh sort.

I have been arguing for—I have been doing hearings since 2000 and have been saying that a market for homeowners is like a soccer game. You do not want to have rules and referees who run around and impinge on the players. But if you do not have boundary rules that say this is what is an ethical marketplace on the boundaries, you will end up with the kind of catastrophic foreclosures that we have had.

You know, for people to say that this is a surprise to them is mind-boggling to me, because I feel like I have been talking about this, and hearings have been recognizing the problem since 1994 when the Home Ownership and Equity Protection Act was first passed.

In that bill, Congress designated that the Federal Reserve was to be the entity to pass these boundary rules to make sure that un-

fair and deceptive practices did not creep into the mortgage marketplace.

And the Federal Reserve to date has simply not done its job. There are really good signs. The current Board, none of them were here in 2000, and they have promised that they will address this problem before the end of the year with a proposed rulemaking.

If they do not do it, then Congress must step in or we will have this same exact problem 8 years from now just like when we thought it was all wound out in 1999 and 2000, it came back in an ever more virulent strain.

Representative Hill. Thank you, Madam Chairman.

Vice Chair Maloney. Thank you. The Chair recognizes the distinguished Congresswoman from California, Congresswoman Sanchez.

Representative Sanchez. Thank you, Madam Chair.

I heard my colleague, and I love Barron Hill, but I think I have a little disagreement with this whole issue that maybe the subprime has caused—the market has caused this.

I actually think that our economy, if you look at the fundamentals of it, has been pretty lackluster in the last 6 years. And that the only bright spot in it was the housing market.

If you had taken the housing market away, taken that piece out, you would have seen that when you look at the Federal deficit in Washington, some of our industries just not really coming back, in fact contracting, that the housing market was actually really pushing the numbers of the economy up so that we could all be fooled in a sense that things were OK.

I mean, I started mentioning this when I got on this Committee, that I thought we had some very, very fundamental problems with our economy. Now it goes bust and everyone is thinking, oh, my, the economy is going to go bad because the housing market has gone away.

Well, yes, I think it has got a possibility to really tank the economy. But if the economy had been stronger in other areas, then we would not see as big an implication. That is my personal opinion. And I know I had that discussion with Greenspan in a couple of the hearings that we had when we was before us.

I also think that anybody who had been asking—maybe it is because of subprime corporations are located in Orange County for a large part that I saw this coming way ahead of time, but if anybody had been asking about what was going on with the housing market and what types of loans people were taking out, I mean the very favorite one in Orange County was a 40-year loan at 1 percent.

And then they would borrow something to make the 10-percent down payment first. I mean, two loans back to back. You know, if you looked at what people were using to get into the product that they were using, you would just say that people were crazy, that this was a crazy market.

People actually offering these products had to have known that this was going to get us all in trouble. So it is not a surprise to me that we are in this situation.

The question is: Is our economy strong enough to take the hit of this housing, what will be I hope just a short-term, by "short-term" I mean like 2- or 3- or 5-year sort of slow down, reduction in prices,

maybe 5 or 10 percent, I hope at the most. I have heard economists say it could be 25 percent, or 50 percent. In some markets of course you can't give away a house these days.

But I think we need to get back to a few things. First of all, how do we help the people who are really losing their homes right now, who made a mistake? They made a mistake. They did not understand what they were getting themselves into.

Part of that can be these unscrupulous people who actually sold it to them, but the fact of the matter is we have a lot of people who, if they lose their homes, probably cannot even get into an apartment because their credit will be wrecked by what has happened. So they are going to be less likely even to find a housing situation, let alone lose their home.

So how do we help them? I think there are a lot of things that Congress can do, and I do not think that we can wait for the Federal Reserve to decide that, you know, prepayment loans—you know, I had some realtors who told me that they are trying to unwind people out of some of these loans, and the prepayments are, you know, 3 or 5 percent of the loan. That is $10,000, $15,000, $20,000 for some people.

We just have got to tell these people, hey, you put them into a bad loan. We are not going to honor that prepayment. I think we as a Congress need to pass some legislation now rather than wait for the Fed to come up with the rules of how we are going to get these people out of it.

If we would pass some legislation in the next couple of months that would actually help that set of people that I think, Dr. Shiller, you were talking about, the ones who maybe are in the first 60 percent of people, the 40 percent you said can refinance, the 20 percent who have the adjustable loan, what would be some of the things?

I mean, I have thought of maybe looking at what indexes are these adjusted pegged to, and how do we make sure that that index does not move up significantly? What are some of the things that we can look at from a legislative standpoint and also from a monetary standpoint to help these people not lose their homes? Or move them into new product?

Dr. Shiller. Well we have a fundamental problem, which is that market economy functions very well overall to product wealth. But it has a chance, a tendency to go to excesses. And so we have seen a boom in home prices which has been supported by irrational expectations.

It has been supported by a sense that these home price movements will go on forever. And that has caused errors to be made both by lenders and by borrowers.

So it is not an easy thing to know how to correct these booms and busts. So I wish I had easy answers to your questions. It seems, though, that it is very important that we do something in the immediate crisis because we are going to see people in the bottom tier of our income distribution hit and hurt badly.

So some of the proposals of Mr. Eakes and Mr. Pollock sound very sensible in the short run, but in the longer run we also have to prevent this kind of thing from happening. So the particular proposal that I launched, which was not my own, was that we should

create some kind of, something analogous to the Consumer Product Safety Commission that reviews practices in the mortgage industry from the consumer's standpoint, and really has as its mandate that it looks at abuses; it collects information about abuses; and recommends changes.

That is one of a number of things. But I just hope that we get to action fast before this crisis unravels more.

Mr. Pollock. If I could make a comment, Congresswoman, there is nothing like a market economy for creating wealth for ordinary people. That is the best thing there is. And as Professor Shiller says, part of a market economy is periodic booms and busts.

It is important to remember that the reason the boom really gets going is because many people succeed. So if you think about, in California for example, people early on who took what we would now look back and say, well, those were terrible loans, 100-percent subprime, floating rate, but they caught the house price appreciation and their house appreciated 30, 40, 50 percent. They had a huge success. They had now big equity in their house. Now they could refinance.

And in every boom, it is the observation by everybody else of all of the successes and having those successes be extrapolated in the behavior—we're talking here about behavior and predictions—that creates the boom.

What we can do in terms of the form of loans, it is the long-time experience, and one of the really reliable statistical regularities about the mortgage market is fixed-rate loans have lower defaults and losses than adjustable rate loans.

That is true of prime loans where adjustable rate defaults are about two or three times what fixed-rate defaults are. It is true of FHA loans, and it is true of subprime loans.

So if we want to be a careful, conservative lender, it helps to have loans fixed for some considerable period, and not necessarily 30 years but let's say a minimum of 5 to 7 years. And careful lenders like Mr. Eakes' organization who are operating in their towns and neighborhoods, the kind of credit record that he cited is very common among bank and thrift lenders. And it is even more common if you are doing predominantly fixed-rate loans.

My final note is, however, if we want fixed-rate loans we have to have securitization. Because as we have learned from history, there is another risk which is interest rate risk on the long-term fixed-rate loan.

If you do not pass that on to the bond holders and you stick it in the local institutions, they are going to get in trouble in a different way.

Mr. Eakes. What I wanted to add was——

Representative Sanchez. Yes, Mr. Eakes.

Mr. Eakes [continuing]. The consumer financial products commission, or financial products, or the Federal Reserve's new guidelines will only affect borrowers going forward. So the second question of what do we do for existing borrowers, brings home the point that, while we can have great sport about whether we will go into a recession or not, if you disaggregate the data and look at specific States, or specific subgroups, we are going to have a catastrophic recession.

Let me just break it out. In the last 2 years, 53 percent of all mortgage loans made to African American families in the Nation were subprime. Forty percent of all mortgage loans to Latinos across the country were subprime. These products that are basically foreclosure machines. We face right now—and the same is true for mobile home owners in rural States.

Those segments are going to be catastrophically hit. If you look at the States, break it out by states—California, Nevada, Arizona, Florida, New York—the States that had the most rapid rise in home prices are going to see the effects being most catastrophic in the reverse direction.

So even if we do not tip into what would be considered a national recession, we are going to have whole cities and whole States that are suffering dramatically. And there are only two ways to intervene in existing—so when I say that for Latino and rural White and African American families, they face right now the greatest threat to family wealth in the history of the country. Right now over the next 2 to 3 years.

And if we do not act to help existing borrowers, which can only happen by having some judicial intervention, either by a foreclosure which clears title and frees up the property for someone else, or a bankruptcy that allows the loan to be written down to the current market value and the loan terms modified so that it can be affordable, we are going to have at least in these microeconomies, we are going to have catastrophe.

Director Orszag. Could I just add very briefly on that broader topic? We are turning to a point you made at the beginning of your statement.

It is often much harder to deal with a mess after the mess is made than to try to mitigate or prevent it in some way in the first place. And you mentioned that there were aspects of economic growth that seem unbalanced. I would just again highlight that we as a Nation are saving 1 or 2 percent of our national income. That is not a sustainable situation.

We are borrowing 6 percent or more from abroad. That is not a sustainable situation. The only question is whether it resolves itself gradually or in a more sudden way. And again, similarly if it were to unravel more quickly than anticipated, we could quickly wind up in a mess that would then be very difficult to work our way out of.

So trying to take reasonable steps against that kind of risk is an important policy objective.

Representative Sanchez. I would completely agree with you, Doctor. It is one of the reasons I am a Blue Dog. That is one of the reasons why, you know, we are trying to bring down the spending at the Federal level.

I think the situation—I do not know why America has not awakened to what is going on here in Washington, D.C., but I think we have some serious financial considerations on our hands for the future.

But trying to figure out what we do for these poor lower-income families that are really going to be hit by what is happening in this loan situation, whether it is African American, Latino, whether it is poor White, in Utah and other places, they are the least able to

take this. And probably the money was made by the upper half while all of this was going on.

So we are looking—I think we need to look for real solution now to help some of these people. So I appreciate your comment. I mean, it is a comment I have had for a long time about our economy. I would not do my spending plan that way, but I am not president.

Thank you, Madam Chair.

Vice Chair Maloney. Thank you. Thank you, and my colleague and friend from New York, Congressman Hinchey.

Representative Hinchey. Well thank you very much, Madam Chairman.

Gentlemen, I apologize for not being here to listen to your testimony. I was tied up with something else, and I very much wanted to hear it, but I will still be able to read it.

I thank you very much for being here. It struck me that the subprime mortgage initiative was a creative but also seemingly dangerous and potentially destructive initiative which was put forward to try to protect and preserve the contribution that the housing industry was making to sustaining the economy when everything else seemed to have fallen apart.

As time has gone on, that seems to be more and more the case. And particularly the answers that I have just heard to all the questions seem to verify that. The impacts that, as you have said, that are going to be had on many, many people—particularly low and moderate income people—across the country are going to be very severe.

Those people are already facing some very dire consequences. Most of the people in this country are increasingly in debt as the country itself is increasingly in debt—our National Debt has now gone up over $9 trillion, just about doubling over the course of the last 6 years—but the debt of ordinary people keeps going up.

The information that I saw recently is that people are spending about 10 percent more than they are making on a weekly, monthly, annual basis, which is something that is seemingly unsustainable.

I understand that there are other situations like this that are going on in other parts of the world. Great Britain I understand recently, there's been some analysis of that as well, how people are spending more than they are taking in, and therefore more than they can afford.

So it seems to me that this economy that we are dealing with now is very, very fragile. The potential impact can be very, very destructive. And frankly, as I look at it, I cannot understand what it is that we might be able to do in order to deal with this immediately.

I think that there is a good possibility that we are going to have to suffer some form of recession of some kind in order to gin up enough attention and enough energy out of this Congress to focus on this issue and try to create something that would be productive.

So I am sorry that I was not here to listen to your testimony, because in all probability you have probably already addressed these things, but if there is something that you would like to say about it now I would very much appreciate hearing it, or comment

on some of the things that I have just said, I would be very grateful to hear.

Mr. Eakes. If you would do this one tweak to the Bankruptcy Code, you will save 1,000,000 families from being foreclosed on, and that will impact 5- to 10,000,000 of their neighboring families. That that one little thing, like deleting 10 words for an exception that made no sense to begin with, it will dramatically change—it does not mean we will not have national pain, but that by itself will do more to help the existing homeowners facing foreclosure than any other single act that you could take. And you could do it with a snap.

Director Orszag. If I could just add one thing about subprime mortgages in general, I think it is important to remember that for, although there are clearly problems—I do not want to downplay them—that for many households this type of product does make a lot of sense, and does help to boost home ownership.

So for a low-income family that is expecting some significant increase in income, for example, and then has trouble qualifying for a conforming type mortgage, or has other credit problems, a subprime mortgage can provide access to home ownership in a reasonable way.

So it is important in addressing the problems that we are facing not to throw that benefit out also. And also to remember that at least as of now the vast majority, something like 85 percent of subprime mortgages, are not in foreclosure and are still operating as expected.

So I do want to just make sure that we underscore that there are benefits to this financial innovation, also.

Mr. Pollock. But 95 percent are not in foreclosure, and 85 percent, if I may correct the number, are not delinquent. That is as of now.

If I could say something, Congresswoman, here, one of the key things about America is people have a right to take a chance. I think it is really important that borrowers have a right to take chance. And lenders have a right to take a chance, if they want to.

I point out in my testimony that the sorts of chances we are talking about, buying a house, are very modest when compared to the chances, say, that our ancestors took being immigrants, or being pioneers and setting off in their covered wagons. We are pretty soft compared to them.

But when they are taking their chance, they ought to know what chance they are taking and really understand what it is they are getting theirselves into.

Dr. Shiller. We have a short-term problem with the subprime mortgage, but it is also part of a bigger long-term problem: that we have been rather complacent over the last decade, really, of home price appreciation. We have been living in a boom economy, and this boom economy has helped us defer worrying about long-term problems.

But we do have a Baby Boomer Generation that is going to retire. We have to think about their pension, and their health care, and these are all tied up with the sense of complacency which we have had in this housing boom, and it is now finally correcting.

So it will bring up all these other problems also.

Mr. Eakes. I want to engage Dr. Orszag just for a second. When he says that 85 percent are paying on time, or 95 percent from Mr. Pollock, that is a snapshot of one moment in time. If you look at a year's loans, subprime loans, the way they have currently been practiced over the last 4 or 5 years, somewhere in excess of 20 percent of those loans will end up in a lost home.

Of those subprime loans, no more than 10 percent created new homeowners. So subprime lending—I've been a subprime lender myself for 25 years, and I feel like that I can defend the industry, done right. But the last 4 or 5 years it has not been a help to people.

It has a short-term benefit of getting someone in a house that 20 or 30 percent—if a large percentage of them will lose their homes because of the product, because it is going to have a payment shock in the third year of 50 percent, it is really a negative drag for that.

So I agree in theory that the subprime marketplace, of which I feel like I am a participant, could be a powerful force for helping people have access to credit, but if it is done poorly it will create much more harm and destruction than good.

Representative Hinchey. Well a lot of it has been done poorly in the last few years. And I think what you have just said, Mr. Eakes, confirms what Dr. Shiller said: That what we are dealing with here has some potential, serious potential, for long-term economic problems, unless this issue is addressed constructively and the circumstances can be at least reversed to some extent.

Mr. Eakes. I agree.

Chairman Schumer [presiding]. Well welcome, and thank you, my colleague and friend from New York.

Representative Sanchez. Mr. Chairman, we have votes coming up.

Chairman Schumer. OK, thank you. I want to thank both of you and your colleagues for being here today.

I will just follow up with my second round. I would like to go back. I know it has been touched on. The most frightening prediction here is Professor Shiller's about the housing bubble and its effect on the whole economy, and if we do have a serious housing bubble all the more reason that we should be moving with some alacrity on the mortgage problem.

Simply lowering interest rates is not going to be the main way to solve that problem. Or simply—well, simply pushing more money into the economy, not if the fundamentals in the mortgage area are not being taken care of.

At the very least it is a highly inefficient way to do it, with other ramifications. So Professor Shiller you testified that we could see a decline—and this is astounding—in home values between 7 and 13 percent in the next year alone; even worse, we may see the likelihood of a great decline, and you characterize it as the worst decline since the Depression—first, that is frightening; that is really astounding. There is probably no way, if they decline to that degree, that we could avoid a recession. Is that fair to say, Dr. Shiller?

Dr. Shiller. I wouldn't go that far. I would say I think there is probably a greater than 50-percent chance of a recession.

Chairman Schumer. Do you agree with that, Dr. Orszag? If his initial prediction on house prices is severe as it is?

Director Orszag. What we provided in our testimony was a scenario in which national house prices declined by 20 percent. So that is a very substantial decline. You get——

Chairman Schumer. One to 1.5.

Director Orszag. A half to 1.5 percentage points per year off of growth through the channels that are sort of quantifiable. And then there is this other stuff, the perceptions.

It is possible that something like a 20-percent real decline in house prices will have a significant effect on the outlook of business executives and consumers.

I would note, though, that a reduction in interest rates, while it may not directly offset all of that, does spur other stuff, business investment and what have you.

Chairman Schumer. But let me ask you this, Dr. Orszag, if there is a 20-percent decline in housing prices, what do you estimate—I think it is in your testimony, I do not have it in front of me—decline in consumer spending?

Director Orszag. Most of the half to 1.5 percentage point decline in economic activity per year that would occur comes through consumer spending. There is a little bit through residential investment, but most of that is a wealth effect through consumer spending.

Chairman Schumer. It is more likely to be the low end, or high end? That is a pretty broad range. And you are dealing with a GDP of 3-percent growth, maybe, not even 2.

Director Orszag. The reason there is a range is that this has to do with when the value of your house goes down by $1, how much less do you spend?

We put out a paper earlier this year on the evidence on that, suggesting somewhere between 2 and 7 for each $1 reduction. The range I was giving you reflects the empirical ambiguity about the size of that response.

Chairman Schumer. But let's say it's 7 percent, the decline in consumer spending, and consumer spending is what, about 70 percent of the GDP?

Director Orszag. There's an extra step, but if it were 7 cents on the dollar for the housing wealth effect, in a 20-percent price decline, you do then wind up with about 1.5-percent slower growth the first year, and another 1.5-percent slower growth——

Chairman Schumer. Oh, so it's 3 percent, the second year? Got it.

Director Orszag. Well, in terms of growth, it's another 1.5, but in terms of the level, it's 3 percent lower.

Chairman Schumer. OK, go it. Do you want to say something about this?

Dr. Shiller. Yes. I've done studies of the wealth effect, too, but remember what we're doing; we're looking at past recessions, in order to quantify the effects on wealth.

And what I think is different about this experience, is that the last 10 years, we have been in a very unusual boom that has led us into an unusual psychology.

And I think that it changes in unpredictable ways. I don't trust my own past analysis of this.

It's a big event that we've been through, and with the recent crises and the prospect of foreclosures for millions of people, it strikes me that there could be a bigger effect than these models predict.

Chairman Schumer. Mr. Pollock, would you like to comment?

Mr. Pollock. I'd just say, Mr. Chairman, that as many people who inhabit the southern tip of New York City, of Manhattan, would say, one thing about falling prices, is that it creates buying opportunities for other people.

Chairman Schumer. It always has.

[Laughter.]

Chairman Schumer. But there's a lot of pain in between.

OK, let me ask you another question. This is about the higher end of the market, which we haven't focused on in this testimony.

Obviously, the ability of those at the higher ends to securitize, has allowed a lot more money to come into the market, and then allowed maybe the mortgage brokers—and not all of them are unscrupulous, but too many are—to do what they have done.

Let me ask you this: Do any of you have any thoughts on how we improve the securitization process with mortgages, so that this situation doesn't repeat itself? Or is the market taking care of that well enough itself?

Usually, when we have problems in the market, they occur in different places, you know? I was very much involved in the S&L fix, you know, and the savings and loan industry, since 1989, when we passed the legislation, has been pretty good. They still remember what happened.

So, could any of you comment on that. Dr. Shiller, why don't you go first?

Dr. Shiller. I think the biggest problem in the securitization process, has been that the rating agencies had not foreseen these problems, and allowed mortgage securities to have triple-A ratings, when they shouldn't have.

I think this is a problem of transition; that when we're in an unusual situation, it's very hard for some organization that's assessing risks, to take that properly into account, and it would be kind of an act of unusual intellectual courage for them to start predicting this crisis a year or two ago, and embodying that in their recommendations, but I do think that they are making corrections.

Overall, I just want to say that financial innovation is very important, and the securitization of mortgages and the different vehicles, have a general good social purpose, which is spreading risk and allowing people to have access to credit that otherwise couldn't.

Chairman Schumer. So you're basically saying, Dr. Shiller, that the place that needs most correction, is the individual mortgage broker to the potential mortgagor and maybe the first lender, because the rest is sort of self-correcting, or because the rest——

Dr. Shiller. Well, we need——

Chairman Schumer [continuing]. Is self-correcting. The credit agencies will never just stamp triple-A on things that are all mortgages. Well, maybe for another 20 years, they won't.

Dr. Shiller. The real issue, to me, at this time, is lower-income borrowers and that we are a country that cares about all people, not just the securitizers of mortgages, and we have to do something for them.

Chairman Schumer. Well, that's what we're trying to do here, with you help.

Go ahead, Mr. Eakes.

Mr. Eakes. I think the challenge is that you have perverse incentives working in the mortgage market now.

Where you used to have a thrift that would make a loan and hold the loan, their interests were completely aligned with the borrower, went bankrupt and had a loss, the lender would have a loss.

Now we have mortgage brokers, most of whom are honorable people, but who have a financial incentive to close every loan as fast as they can, without regard to whether it's a good product for the borrower. And that's just the financial incentives that they have operating and putting pressure on them.

And if I told you that we were going to repeal all of the State statutes that had it be—that held responsible, the receiver of stolen goods, we would have a whole lot more receiving of stolen goods.

Chairman Schumer. Sure.

Mr. Eakes. But we make those parties responsible, even though they weren't the ones that——

Chairman Schumer. Mr. Eakes, do you disagree with—I mean, Dr. Shiller seemed to indicate—and, I think, Dr. Orszag earlier—that the watchdog here, according to Dr. Shiller, are the credit rating agencies, because once they said these are good securities, people bought them.

And you can't ask the individual investor to look into the 611,000 mortgages that are part of the large security, especially when they're chopped up.

Mr. Eakes. I think there are two cases.

Chairman Schumer. And so my question is, is it going to be self-correcting, or do we need to do something? Are the credit agencies and the investors chastened?

Mr. Eakes. The gate for the credit rating agencies, has also a perverse incentive. Somewhere near 70 percent of all of the revenues for Moody's and S&P in recent years, was structured finance, this product, all of which was paid to them by the issuers.

So the ratings agency is meant to be a disclosure and an information transparency to investors. But the investors don't pay for that service; instead, the people who are profiting from pushing the product, are paying the ratings agencies.

Chairman Schumer. Like the accounting profession.

Mr. Eakes. It's an inherent conflict of interest. No matter how much firewall you put up, there ought to be SEC—that piece of the incentive, needs to be restructured.

On the front end, the gate with mortgage brokers, the first lender who pays a broker for delivery of a loan, should be responsible for any bad actions taken by that broker.

Chairman Schumer. Mr. Eakes, I have legislation to do just that.

Mr. Eakes. I know you do.

Chairman Schumer. So, I'm glad you're supportive. Would everyone agree with that proposal?

Mr. Pollock. I do not, Mr. Chairman.

Chairman Schumer. Go ahead, Mr. Pollock. I was wondering when your American Enterprise Institute stuff would bubble up.

Mr. Pollock. It's been there all the time.

[Laughter.]

Mr. Pollock. The argument, as you know, gets very clear, and the experience of being in experiments of trying to pass that liability on, is that it tends to shut off the very funding that we're trying to create.

I think it is quite clear that in any lending operation, you ought to have a responsibility of due care and diligence, but somebody else's fraud that fools you, in my judgment, shouldn't also punish you.

I do think, coming back to your first question, that the prime market, we don't have to worry very much about. We've had a panic.

Financial panics tend not to last very long, especially when central banks start cutting rates, and the prime market will, in my judgment, adjust fairly rapidly. That's why I would be, for example, opposed to raising the conforming loan limit for Fannie and Freddie. We don't need to.

With respect to credit rating agencies and the lessons, the clear verdict of financial history, is that lessons are always learned in these busts, and they last about 10 to 15 years and then a new group of people gets to relearn them.

There is an issue with the credit rating agencies, in my judgment, about the two possible models, the issuer-paid model, as Mr. Eakes referred to, which is the dominant model, although all of the original credit rating agencies were investor-paid, in the beginning—Moody's and Poor's Rating Service and Fitch, all got into business issuing ratings for investors, up until the 1970s.

Chairman Schumer. That's interesting.

Mr. Pollock. Then the switch in payment basically happened. The story is—I'm not sure it's true—it was because of the Xerox machine, because if you were selling your book of ratings to investors, you couldn't protect it anymore as a proprietary property.

Chairman Schumer. Carbon paper wasn't good enough?

Mr. Pollock. Carbon paper wasn't good enough. But it's my view that we ought to have as robust a competition as possible between issuer-paid rating agencies and investor-paid rating agencies.

There are some of those. It would do us well to have more. The SEC has been a large obstacle to letting investor-paid agencies compete, by withholding, by historically withholding their so-called NRSRA, Nationally Recognized Statistical Rating Agency imprimatur from them.

I think a really useful project would be to set our minds on how we could create a more robust presence in the market by rating agencies which are purely paid by the investors, and who would rate, purely looking at the investors.

One of the ideas I've had on this, is that the major institutional investors themselves, maybe ought to be willing to fund the cre-

ation of a highly competent major rating agency, which would work only for them.

And just a final point, Mr. Chairman, when you mentioned the going through the individual loans, I've been told by experts in securitization, that major institutional investors do actually go through individual loans before they buy securitized mortgage pools and run their own models on them.

The problem is the adequacy of any model—an investor model, a rating agency model, and, if I may say so, colleagues, a macro economic model—there's always a slip between the model and the reality.

Chairman Schumer. Mr. Pollock, I appreciate what you're saying, but knowing what I've known, even in the last 8 or 9 months, you know, the kind of stuff Mr. Eakes deals with, what's been going on on the ground, it's hard to give much credence to those models.

Mr. Pollock. I fully agree, Mr. Chairman.

Chairman Schumer. People were just ripped off and given mortgages they couldn't afford, for the very reason, I think, that Dr. Shiller just mentioned; because the mortgage broker and the initial mortgage lender, just walked off into the sunset.

And they made huge fees. I mean, I've used this example before, but just to share it with you, a fellow who I met, who is a prime, just like you say, Mr. Eakes—and I'm going to come to that as my last question—who would have qualified for a prime loan, refinanced his home.

And the majority of people who are in these messes, are not new homeowners. You know, with all due respect, Mr. Pollock, the ideological view that we're really just funding new homeowners who never would have gotten funded before, that's happened to some people and that's good, but many people were like this gentleman.

He had a home, he had paid about half his mortgage. He needed $50,000, because he had diabetes and his healthcare plan didn't pay for it. A mortgage broker calls him up and says, I'll refinance your home and get you $50,000 in cash.

They refinanced the home, and the rate went way up, of course, and he lost his home. But of the $50,000, do you know how much he actually got? It was $5,700.

The mortgage broker made $22,000 as a fee, because he landed, as Mr. Eakes has pointed out, a very high-interest loan that this man, who's a prime candidate, prime-rating candidate—he was a retired subway motorman. He has a pension, he has Social Security, and a bank—it wasn't a bank, sorry—the lender, got $11,000 as a fee, and then between the appraiser, the lawyer, and everyone else, this poor man got $5,700.

Mr. Eakes. And lost his house.

Chairman Schumer. And lost his house, to boot.

Mr. Pollock. May I make one comment?

Chairman Schumer. Please.

Mr. Pollock. That's a story of the very sort of thing we'd like a well functioning market not to have happen in, if I can put it that way.

I don't think there's any doubt that in the ideal mortgage market design, the original lender would maintain a life-of-the-loan credit interest in the loan.

I do a fair amount of work with emerging or developing countries as they try to think about mortgage systems, and that's one of the things I always advise them: make sure that the organization that's making the loan stays on the hook in some serious way for the credit.

It's not impossible, but it's harder to do that in a securitization world, and for other reasons, namely, interest rate risk, we really like securitization, and moving certain risks to the bondholders. We're caught between these two desires and trying to figure out how to somehow satisfy both.

Chairman Schumer. Did you want to say something, Dr. Orszag?

Director Orszag. Yes, just briefly. I think your question touched on and then we didn't really address, the jumbo market above conforming limits. There is a different set of considerations there.

Coming back to the Ned Gramlich quotation, you would think that jumbo borrowers will often—not always, but will often have the sophistication to understand more complicated financial instruments, and, therefore, are somewhat less sympathetic in terms of financial assistance—the problems in the jumbo market, although they're there, seem to have tempered a bit recently with spreads coming down a bit, so I think a broad array of policy analysts believe that there's less justification for intense intervention there, than at the bottom.

Chairman Schumer. Right. One final question, if I might, just one final question for me, and that is just to Mr. Eakes. You mentioned—and this is astounding. I say this all the time. The media never picks this astounding fact up, which is at the core of the problem, that 40 percent of current subprime borrowers could have qualified for prime loans. That's an astounding statistic.

It probably means a higher—anyway, so it seems to me, these borrowers would be the best targets for the kind of preemptive refinancings or loan modifications that you're talking about. Are you seeing efforts to target these specific borrowers, to go find them and target them, or is that sort of like finding a whole bunch of needles in a big haystack?

Mr. Eakes. Well, now, one of the few good benefits of having a liquidity crisis, is that these borrowers who have good credit, cannot be easily refinanced back into another subprime loan. That was the business that's occurred over the last 10 years.

So, now, those borrowers, their only refinancing is to a prime loan, and that's a good thing.

Chairman Schumer. But how many of them are actually——

Mr. Eakes. Nobody really knows.

Chairman Schumer. But it's probably very few, right?

Mr. Eakes. It's not enough.

Chairman Schumer. It's hard to find them. Is that right? Am I wrong about that?

Mr. Eakes. It's hard to find them, and the person who has the data about that borrower, what their performance record is, what

their credit score is, is the loan servicer-lender, who made the subprime loan to begin with, and they don't always have an incentive or, in many case, don't even have the capacity to originate a prime loan.

Chairman Schumer. A lot of them are bankrupt.

Mr. Eakes. A lot of them are gone.

Chairman Schumer. Congressman Hinchey?

Representative Hinchey. Mr. Chairman, I just want to thank you for holding this hearing. I think it's been very fascinating, listening to this discussion. I'm sorry I wasn't here earlier to hear the testimony, but I'm awfully glad I got here to hear these questions.

Chairman Schumer. Thank you.

Representative Hinchey. It seems to me that the evolution of this mortgage financing process that we've seen, particularly the way in which the subprime aspects of it have been carried out over the last few years, is certainly kind of devolution in the impact that it's having on so many people, on a larger number of people. That number seems to be growing.

It's one of those good capitalism/bad capitalism situations. If we just allow this to continue, knowing that the housing market has been the main driving force in keeping this economy sustained, I just wonder what the consequences are going to be.

And in the context of that wonderment, you can't help but being a little bit fearful that the situation is going to get successively worse.

Chairman Schumer. Thank you, Congressman Hinchey.

I want to thank each of our four witnesses. You each were really excellent. I hope this hearing—it was on CSPAN, so I hope a lot of people watched. I hope it stimulates people to talk about these issues, because this is the nub of the problem we've talked about, and we get a lot of talk around the issue and above the issue, if you will, but not at the issue.

And that's what I've been trying to do for the last several months, is focus it on the issue.

I also want to thank my staff for the JEC. The reason we have four excellent witnesses, is that they chose you, and they're always on the ball.

So, thank you all, and, without objection, we're adjourned.

[Whereupon, at 11:39 a.m., the hearing was adjourned.]

Submissions for the Record

JOINT ECONOMIC COMMITTEE
SENATOR CHARLES E. SCHUMER
CHAIRMAN

I would like to welcome my fellow Committee Members, our witnesses and guests here today for this very important hearing on the impact of the subprime mortgage meltdown on the broader economy. My colleagues and I on this committee have been concerned for months about the dangers to the American economy as a result of widespread, unscrupulous subprime lending, and the economic news in the last six months has disappointingly confirmed those fears.

Despite all the reassuring statements we've heard from the administration that the impact of this mess would be "contained," it has not been contained, but has been a contagion that has spread to all sectors of the economy.

We've seen it most clearly in the financial markets. This summer's credit crunch was in large measure attributable to the collapse of the U.S. subprime mortgage market. It shook Wall Street and required the emergency intervention of central banks throughout the world to restore liquidity to international credit markets.

The news outside the financial markets, while not so stark, has been little better. We all saw the anemic August jobs report—for the first time in four years, the economy actually lost jobs. Consumer spending—the engine behind much of our recent economic growth—has begun to slow down. Most economists have lowered their already weak expectations about GDP growth even further. For the first time in years, the "R word"—recession—is being discussed far and wide as a real possibility.

And, we know that the worst is still yet to come, as the riskiest subprime loans will begin to reset in a very weak housing market over the coming months. This morning, we heard that housing construction fell to its slowest pace in 12 years. The collapse in housing investment has already shaved nearly a full point off of GDP growth. The inventory of unsold homes already stands at record levels. Builder confidence has sunk to record lows. In many parts of the country, real home prices have declined, on a year-to-year basis, for the first time since 1991.

If there is anyone left who doubted the repercussions of the subprime mess and the risks to the economy, they should look no further than what the Federal Reserve Open Market Committee did yesterday.

In March, Chairman Bernanke came before this committee and told us that the problems in the subprime market would have little or no impact on the overall economy. Yesterday, the Federal Reserve cut the federal funds rate by 50 basis points, again primarily in response to the fallout from the subprime crisis.

When a conservative Fed drops the interest rate this much, it is obvious that they believe the economy is in trouble. And while yesterday's rate cut is a welcome indication that the Fed realizes the real risks to our economy, it is important to recognize that a half a point reduction will do little to get at the deeper, underlying problems to our overall economic health. It is a temporary solution to a bigger problem, and one that must be applied infrequently and with caution.

My concern, and the reason that I have called this hearing, is that, despite all the bad news, despite the sudden calls for action from those who just a few short months ago were assuring us there was little to worry about, I fear that we still don't appreciate the seriousness of the problem we are facing. Our policy responses are not matching the magnitude of the risk that still lies ahead:

And what exactly does lie ahead?

• An estimated *1.7 million foreclosures* are predicted to occur in the next two to three years due to adjustable rate mortgages resetting to unaffordable rates.

• The Center for Responsible Lending has predicted that subprime foreclosures will lead to a net loss in homeownership and a cumulative loss of *$164 billion in home equity*.

• The *lost property values* from the spillover effects of these foreclosures could reach up to *$300 billion* in neighborhoods across the country, and *lost property tax revenues could exceed $5 billion*.

These alarming statistics just refer to the *direct* impact of this crisis. The indirect consequences—such as risks to our broader economic growth, household wealth, the health of our financial markets, and our relationship with global markets—are still unknown. I hope that today's hearing will at least serve to clarify some of the dangers that cloud our economic horizon.

One of the gravest dangers we face, as we will hear today from Professor Robert Shiller, is that we are witnessing the bursting of a speculative bubble in the housing market that will impact ALL families—not just subprime borrowers. If, as Professor Shiller suggests, significant real nationwide housing price declines are on the horizon, we face the very real possibility that the housing market will drag the economy down with it.

Our country simply cannot afford a slowdown in economic growth. When income inequality is at historic highs, deficits are looming, and investments in critical infrastructure are drying up, economic growth is our best hope for righting past policy wrongs and getting our country back on track.

Despite all of this bad news . . . the good news is that workable solutions are out there, and we have time to put them into place to help limit the damage.

First, we need to do everything we can to arm the local housing nonprofit groups that are working around the clock with subprime borrowers. Last week, with the help of Senators Brown and Casey, we secured *$100 million in foreclosure prevention* funding targeted to the local nonprofit groups that are pivotal in bringing subprime borrowers and lenders together to achieve loan workouts. I've asked both the administration, and the main private market players in the subprime market, to help us find more funding to channel to these nonprofit groups—particularly as their case loads grow more and more each day.

Second, we must use the Federal Housing Administration, Fannie Mae and Freddie Mac strategically to target relief to subprime borrowers. As we all know, government-backed products—FHA-insured mortgages and Fannie and Freddie-guaranteed loans—are the only game in town in terms of providing liquidity to the mortgage markets and safe, sustainable products to subprime borrowers. And while my colleagues and I on the Senate Banking Committee expect to pass an FHA Modernization bill today that will help thousands of families keep their homes—*we can and must do more with these critical tools that we have in our arsenal to assist more of the 1.7 million families at-risk homeowners*.

That is why I introduced a bill two weeks ago—the *Protecting Access to Safe Mortgages Act—that will temporarily lift the limits on Fannie and Freddie's mortgage portfolios by 10%, which will free up approximately $145 billion for the purchase of new mortgages*. The bill requires that half of this total go directly to refinanced mortgages for borrowers who are stuck in risky adjustable rate mortgages because I believe that targeting the borrowers that are likely to default will help shore up the housing market and assist the broader credit markets and economy as a whole.

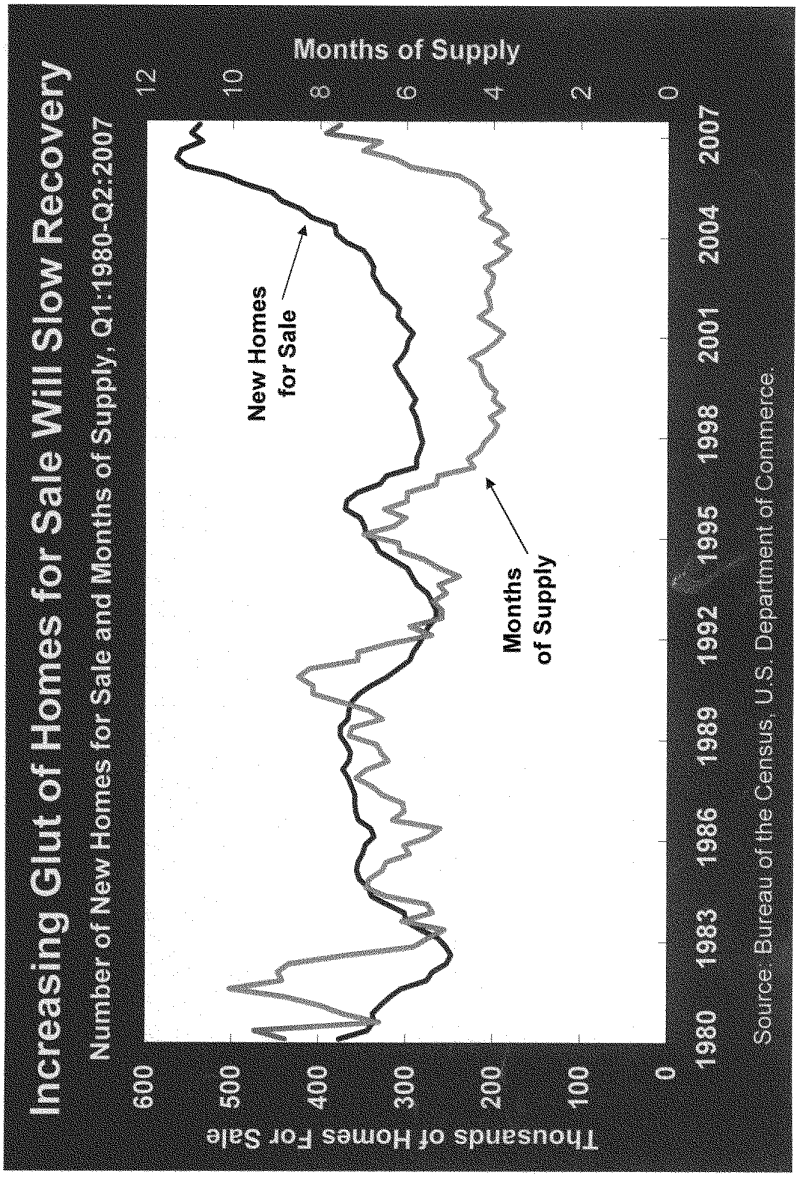
This morning, OHFEO announced that it will adjust Fannie Mae's portfolio cap upwards by only 2% a year, after ideologically opposing a cap increase over the past several weeks. Now that OFHEO has put its toe in the water, it is time to jump in. Whatever they call it, there is no doubt that this is an increase in the portfolio caps that I have been calling for. This small increase, however, doesn't respect the magnitude of this crisis. Hopefully this ideological driven and rigid opposition to raising the caps is about to fade.

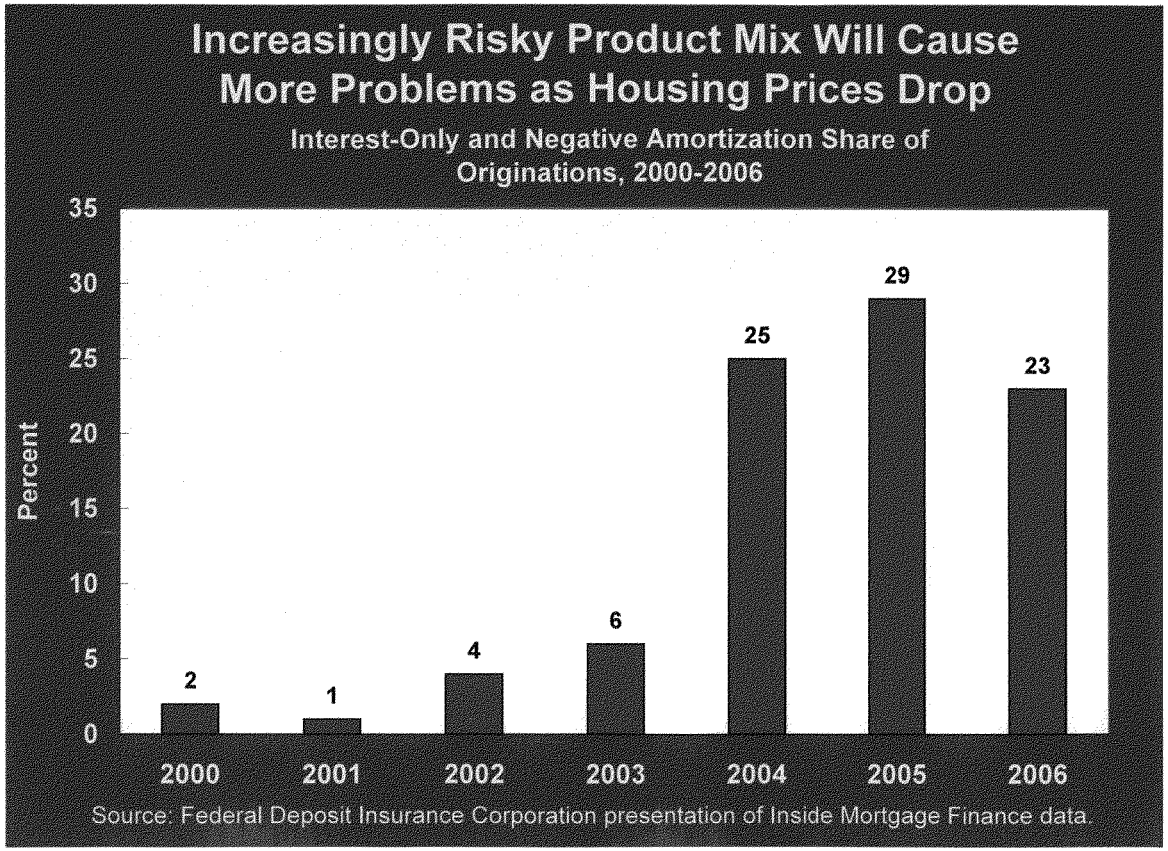
We all need to work together to adopt common-sense measures that can go a long way to help make SAFE, AFFORDABLE refinancings possible for tens of thousands of Americans trapped in the subprime mess that never needed to be in it in the first place.

In short, I truly hope that the White House is paying close attention to this crisis—because we are far from solving it. And I hope that this hearing will draw more attention to the real economic risks that still lay ahead, and what policy actions we can take to curb the damage.

Without further delay, let us get down to business. So we can proceed quickly to the witness testimony, and to allow time for a few rounds of questions, I would ask that we limit opening statements to the Committee's Senior Republican Senator,

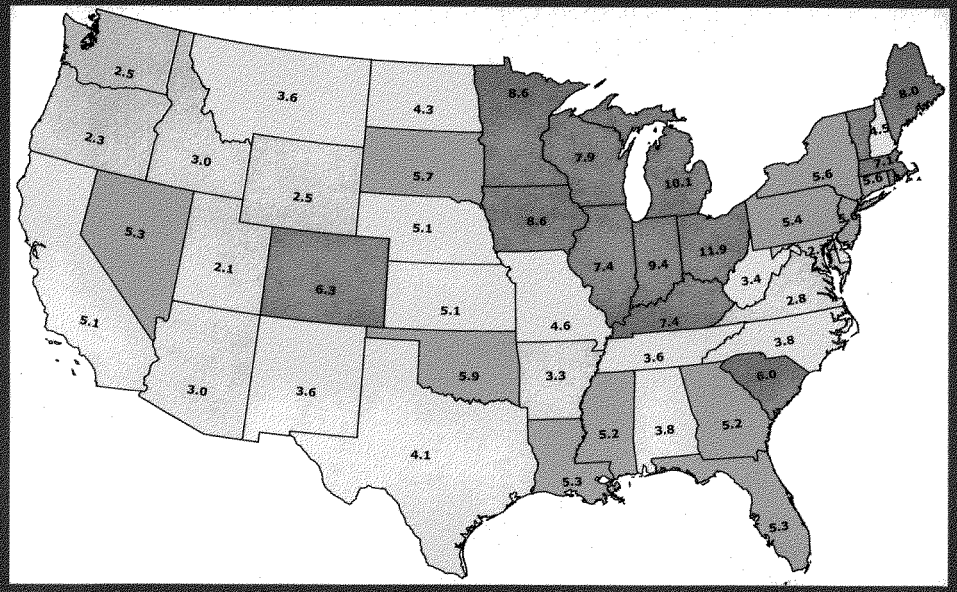
Senator Brownback and Vice Chair Maloney. We will of course enter everyone's opening statements into the record.




Increasingly Risky Product Mix Will Cause More Problems as Housing Prices Drop
Interest-Only and Negative Amortization Share of Originations, 2000-2006
Percent
35
30
25
20
15
10
5
0
2
1
4
6
25
29
23
2000
2001
2002
2003
2004
2005
2006
Source: Federal Deposit Insurance Corporation presentation of Inside Mortgage Finance data.

Subprime Foreclosures High Nationwide, Midwest Hit Hardest

Percent of Subprime Mortgages In Foreclosure, Second Quarter 2007



0 to 3.4%
3.4% to 5.2%
5.2% to 6.0%
6.0% to 12.0%

Source: Mortgage Bankers Association.

Figure 1: Real US Home Prices, Real Owners Equivalent Rent, and Real Building Costs, quarterly 1987-I to 2007-II.

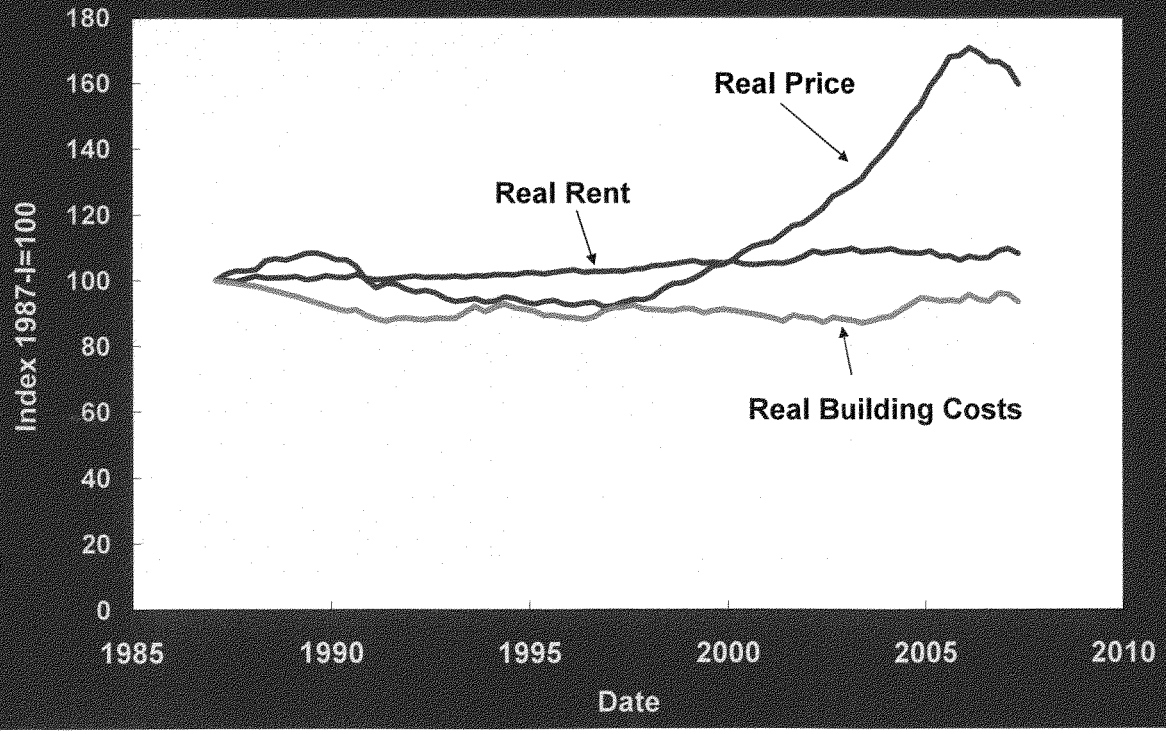
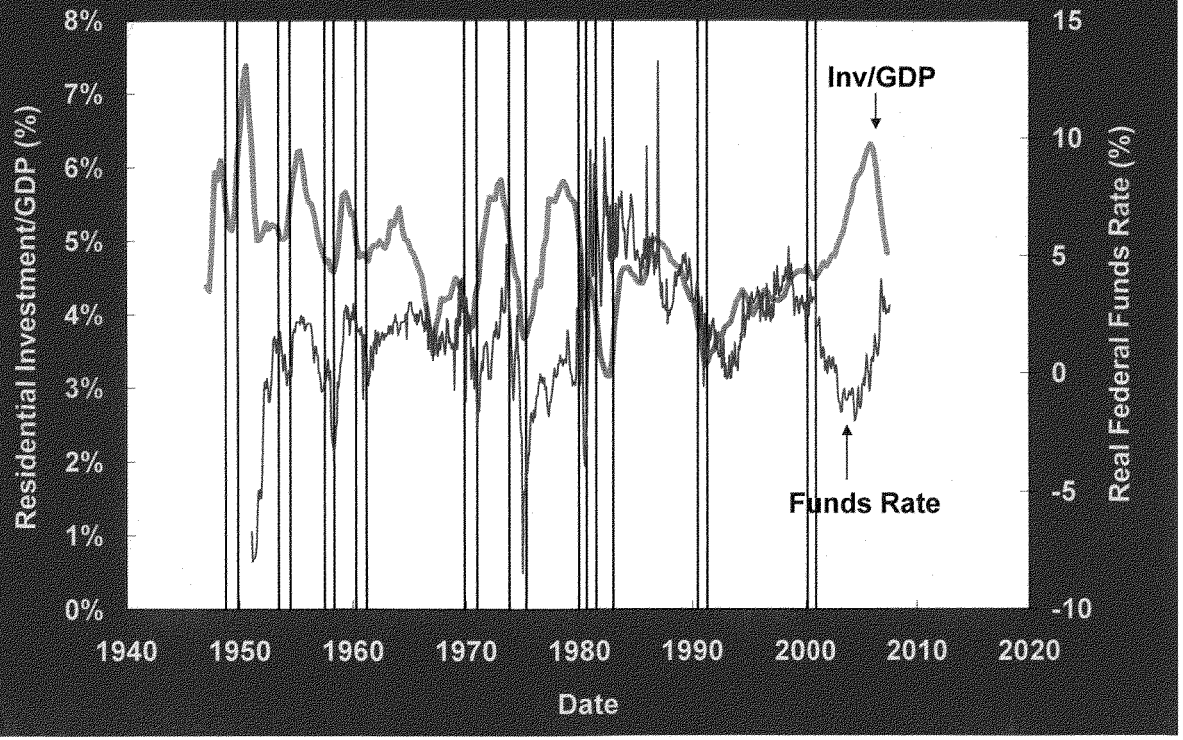


Figure 2: Residential Investment as Percent of GDP (quarterly, 1947-I to 2007-II) and Real Federal Funds Rate (monthly January 1947 to July 2007).



JOINT ECONOMIC COMMITTEE
SENATOR CHARLES E. SCHUMER, CHAIRMAN
REPRESENTATIVE CAROLYN B. MALONEY, VICE CHAIR

PREPARED STATEMENT OF REPRESENTATIVE CAROLYN MALONEY, VICE CHAIR

Good morning. I would like to thank Chairman Schumer for holding this hearing to examine the subprime lending disaster and the threat to the broader economy.

Anxiety over the state of the economy remains high, as concerns mount that the subprime mortgage meltdown will infect the rest of the economy. Yesterday, RealtyTrac released the latest bad news that foreclosures reported in August increased 36% since July and 115% since this time last year. Expectations are that the next 18 months will be even worse, as many subprime loans reset to higher rates. The credit crunch, the worsening housing slump, market volatility, and weak consumer confidence point to a gathering storm that could drag down the economy, taking thousands of American jobs with it.

Consumer spending has been propping up the economy, but the ability of American consumers to keep spending may be flagging with slowing or declining home prices, putting the economy at serious risk of a downturn. Dr. Shiller worries that the collapse of home prices that we will see "might turn out to be the most severe since the Great Depression." Millions of Americans are in danger of losing their homes, and if employers continue to pull back on hiring, their jobs may be in danger too.

In a clear sign of the seriousness with which the Fed now views economic conditions, yesterday the FOMC moved to lower its key short-term interest rate by 50 basis points, to 4.75 percent, and left the door open to additional cuts. The Fed's action is an effort to prevent the economy from derailing and to ease credit pressures, but it is no silver bullet.

In Congress, we are focusing on helping families stay in their homes and preventing another crisis like this in the future.

Just yesterday, the House passed legislation to enable the FHA to serve more subprime borrowers at affordable rates and terms, attract borrowers who have turned to predatory loans in recent years, and offer refinancing to homeowners struggling to meet their mortgage payments. Fannie Mae and Freddie Mac are providing much needed liquidity in the prime market right now. We passed a GSE reform bill in the House, but we should also raise the cap on these entities' portfolio limits, at least temporarily, so that they can provide additional help with the subprime crisis. To make servicers more able to engage in workouts with strapped borrowers, we pushed FASB to clarify that its Standard 140 allows for modification of a loan when default is reasonably foreseeable, not just after default. And I think we should also eliminate the tax on debt forgiveness, sparing families the double-whammy of paying taxes on the lost value of their homes.

For the future, our regulatory system is in serious need of renovation to catch up to the financial innovation that has surpassed our ability to protect consumers and hold institutions accountable. Even though the federal banking regulators have put out interagency guidance on subprime loans to improve standards, some three-quarters of the subprime market does not have a federal regulator. We need to extend the guidance to create a uniform national standard to fight predatory lending and a single consumer protection standard for the entire mortgage market. I believe regulating brokers and other unregulated participants in the subprime market are also essential steps.

Shoring up the foundation of the American Dream will help families and strengthen the economy.

I thank the chairman for holding this hearing and I look forward to the testimony of our witnesses.

PREPARED STATEMENT OF HON. PETER R. ORSZAG, DIRECTOR, CBO

TURBULENCE IN MORTGAGE MARKETS: IMPLICATIONS FOR THE ECONOMY AND POLICY OPTIONS

Chairman Schumer, Vice-Chair Maloney, Senator Brownback, Congressman Saxton, and Members of the Committee, I appreciate the opportunity to testify on

the current turmoil in the nation's mortgage markets and its implications for the broader macroeconomy.

Housing markets entered a period of sustained growth in the mid-1990s—the rate of home ownership expanded rapidly, and in the early 2000s, housing prices increased dramatically. Since 2005, however, the markets have softened substantially, and in many areas of the country, housing has now entered a deep slump. Sales of new and existing homes have dropped, and many forecasters expect further declines in coming months. The construction of new single-family homes has contracted sharply. The inventory of unsold existing homes has climbed to record levels. At today's sales rates, it will take about nine and a half months to clear the current inventory of existing homes on the market. Home prices have stopped climbing in many areas of the country and have begun to fall in some. Many forecasters now believe that the national average home price could decline significantly before housing markets stabilize.

Those developments have raised a number of important questions. What factors account for the recent slump in housing markets? How will developments in housing affect the rest of the economy? To what extent will consumers retrench in the face of declining home values, and to what extent will turmoil in certain parts of the mortgage markets spill over into other credit markets and affect the intermediation of funds between borrowers and lenders? And how should policymakers respond to the situation?

My testimony reviews issues raised by those questions and comes to the following conclusions:

- Innovations in mortgage markets, including the development of subprime mortgages, permitted many more people to become homeowners by reducing credit restraints. The home ownership rate had varied within a narrow range from the 1960s to the mid-1990s but then increased from about 65 percent in 1995 to about 69 percent in 2006.
- The boom in housing prices between 1995 and 2005 was caused by several factors, including low interest rates, buyers' expectations of price increases, and easier availability of credit, especially through subprime mortgages (which played a particularly prominent role over the past few years).
- Over the past 2 years, prices have softened, and problems in the subprime market in particular have become apparent. To date, the problems with subprime mortgages are disproportionately concentrated in California, Nevada, Arizona, and Florida. Other areas of the country, however, have also been significantly affected.
- The turbulence in housing markets could affect the broader macroeconomy through four channels: reduced investment in housing; a reduction in consumer spending because household wealth declines; contagion in financial markets, which can impede business investment and some household spending, especially for consumer durables; and a lessening of consumers' and businesses' confidence about the future, which can constrain economic activity.
  - The available data and evidence suggest that the first two channels (reduced investment in housing and reduced consumer spending because of a decline in wealth) will impose a significant drag but are unlikely, by themselves, to tip the economy into recession. The other two channels—contagion in financial markets and weakened confidence—are more difficult to predict but could pose serious economic risks.
  - The economic outlook is thus particularly uncertain right now. Analysts have lowered their economic forecasts as a consequence of this summer's turmoil in financial markets, and the risk of a recession is heightened. But the most likely scenario involves continued (albeit more sluggish) economic growth, and few analysts expect an outright recession next year. Even the average for the bottom 10 forecasts included in the *Blue Chip* survey (an average of about 50 private sector forecasts) released in early September suggested 2.0 percent real growth in 2008, and not a single forecaster projected negative growth in 2008.
- Policy proposals for addressing the financial difficulties originating in the subprime market could be classified into three categories: sustaining the overall economy, helping homeowners facing foreclosures, and preventing future crises by protecting homeowners and reducing the chances of a recurrence of financial instability.
  - In evaluating policies to achieve those goals, it is important to recognize that although significant problems have arisen, not all current housing and credit policies are broken and that the seeds of future crises are often sown by the reaction to current crises.
  - Policy interventions need to reach an appropriate balance between assisting people at risk from events beyond their reasonable control and allowing people to assume responsibility for the consequences of their own decisions.

• The challenge is to find ways of correcting the abuses and instability that are now becoming apparent while strengthening successful institutions and continuing the benefits of market innovation.

BACKGROUND

The current contraction of housing markets comes after several years of extraordinary growth in the residential sector, and the recent slump in housing partly reflects an inevitable correction to more normal levels after that remarkable growth. By 2005, home sales had climbed to record levels. The residential construction industry boomed, and home prices soared in many areas of the country.

Many people who had previously been renters became homeowners. As a result, the rate of home ownership, which had varied within a narrow range from the 1960s to the mid-1990s, increased from about 65 percent in 1995 to about 69 percent in 2006 (see Figure 1). That rise meant that approximately 4-½ million more families that otherwise would have been renters owned their homes. Investors and second-home buyers also purchased a growing number of properties, accounting for more than one-sixth of all first-lien loans to purchase one-to-four-family site-built homes in 2005 and 2006.

The housing boom stemmed from many factors. Low interest rates, both short- and long-term, in the early 2000s spurred demand for houses. The Federal Reserve kept short-term rates low through mid-2004 in an effort to promote growth, as the growth of gross domestic product (GDP) was slow to recover from the recession of 2001 and as some analysts expressed concerns in 2003 about the possibility of deflation. The housing sector is generally more sensitive to interest rates than most other sectors, so the effect of monetary policy is often channeled to the economy through housing markets. Rates for 30-year conventional mortgages, which had averaged 7.6 percent from 1995 through 2000, dropped to 5.8 percent in 2003 and generally remained below 6 percent until the fourth quarter of 2005. The low rates increased the affordability of homes, increased demand, and ultimately caused housing prices to be bid up. More people decided to live in separate households than would have occurred in the absence of the housing boom; that phenomenon both reflects and partially caused that boom.

Homebuyers' expectations of continued and rapid home price inflation also appear to have played a central role in propelling prices upward. If people believe that prices will rise, demand for homes increases, which puts upward pressure on prices. Thus, the expectation of higher prices can become a self-fulfilling prophecy in the short run. But that temporary cycle may not be tied to underlying fundamentals (such as demographic forces, construction costs, and the growth of household income), and in the long run, prices will ultimately evolve back toward becoming aligned with those fundamentals. To the extent that the underlying fundamentals are reflected in rental prices, the ratio of housing prices to rents may provide insight into the degree to which prices are deviating from the fundamentals. The ratio tended to vary within a relatively narrow range between 1975 and 1995 before climbing steeply between 1995 and 2005 (see Figure 2). To be sure, homebuyers' expectations of home prices may deviate from long-term fundamentals for extended periods of time, as shown by evidence that Professor Robert Shiller of Yale University and others have developed, and the prolonged rise in the ratio of house prices to rents between 1995 and 2005 is consistent with the possibility of such extended deviations of prices from underlying fundamentals.

Another major factor in the housing boom was the plentiful supply of credit, which manifested itself most dramatically in the expansion of the subprime mortgage industry. Subprime mortgages are extended to borrowers who for one reason or another—a low credit rating, insufficient documentation of income, or the capacity to make only a low down payment—do not qualify as prime borrowers. The share of subprime mortgages rose rapidly after 2002, and more than 20 percent of all home mortgage originations (in dollar terms) in the past two years were for subprime loans. By the end of 2006, the outstanding value of subprime mortgages totaled an estimated $1.2 trillion and accounted for about 13 percent of all home mortgages.

Subprime mortgages include fixed-rate mortgages, adjustable-rate mortgages (ARMs), and combinations of the two, such as the 2/28 mortgage, in which the interest rate is fixed for two years and then varies for the 28 years remaining on the life of the loan. Many adjustable-rate loans have so-called "teaser" rates, which offer lower-than-market rates during the loans' early years. Subprime mortgages may be interest-only loans and negative amortization loans, in which the principal can actually grow during the initial years of the loans. A common characteristic of many subprime loans is that they offer borrowers low monthly payments in the loans'

early years but higher ones in later years. Prepayment penalties (which impose fees on borrowers who want to pay off the remaining balance on a mortgage early) are common on subprime mortgages that have teaser rates but relatively uncommon on prime mortgages.[1]

Subprime mortgages have provided significant benefits to many borrowers. The availability of subprime mortgages has expanded home ownership, especially in minority and low-income communities. Many borrowers in such communities have low income, have less than stellar credit histories, or can only make down payments that are smaller than prime lenders require. Subprime loans may be particularly appropriate for people whose income is expected to rise—for instance, if they are in the early stages of a career. The number of borrowers with first-lien subprime mortgages has climbed to about 7-½ million, and many of them would not have been eligible for a prime mortgage and might not become homeowners in the absence of subprime mortgages. Although the foreclosure rates on subprime mortgages have received a great deal of attention and are higher than those on prime mortgages, over 85 percent of the borrowers who currently hold subprime mortgages (including both fixed-rate and adjustable-rate ones) are still making their payments on time.

The growth of the subprime mortgage industry stemmed from three factors. First, legislative and regulatory changes made in the 1980s lifted constraints on the types of institutions that could offer mortgages and the rates that could be charged. Second, the development of new credit-scoring technology in the 1990s made it easier for lenders to evaluate and price the risks of subprime borrowers. Third, the expansion of the securitization of subprime mortgages allowed the market to bear the risks of those mortgages more efficiently and at lower costs.[2]

As has become apparent, the underwriting standards of some originators in the subprime mortgage market slipped. Some made loans to borrowers who put little money down—and had little to lose if they defaulted—and to borrowers with particularly weak credit histories. Some subprime lenders also required little or no documentation of borrowers' income and assets, and determined borrowers' qualification for mortgages on the basis of initial teaser rates. That approach created opportunities for both borrowers and originators to exaggerate borrowers' ability to repay the loans. Those problems fundamentally stemmed from a failure of lenders to provide the right incentives to and oversight of originating brokers. In the traditional form of mortgage financing, the originator of the loan also holds the loan in its portfolio and therefore has a strong incentive to learn about the borrower's ability to repay. By contrast, in the securitized form of mortgage financing, the originator sells the mortgage to a third party and earns a fee for origination but receives little immediate reward for discovering relevant information about the borrower. As a result, the originator may not have adequate incentives to exercise care and discretion in its underwriting unless the ultimate purchaser carefully structures such incentives.

Some borrowers may also have not understood the complex terms of their mortgages, and some mortgage originators may also have taken advantage of unsophisticated borrowers. Certain adjustable-rate mortgages may have been among the more difficult mortgages for first-time borrowers to understand. Many of those mortgages made in recent years included teaser rates, which may have confused some borrowers about the eventual size of their mortgage payments when their mortgage rates were reset. Most of those mortgages also included prepayment penalties, which protected lenders from the potential churning of mortgages with very low initial rates but also made it more expensive for borrowers to refinance their loans when their monthly payments rose. As Edward Gramlich asked in a speech that was delivered on his behalf just before he died, "Why are the most risky loan products sold to the least sophisticated borrowers?"[3]

The subprime market began to experience growing problems after 2004, when delinquencies on subprime ARMs began to rise. By the second quarter of 2007, almost 17 percent of subprime ARMs were delinquent, up from a recent low of 10 percent in the second quarter of 2005 (see Figure 3). In addition, the share of subprime ARMs entering foreclosure increased from an average of 1.5 percent in 2004 and

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[1] John Farris and Christopher A. Richardson, "The Geography of Subprime Mortgage Prepayment Penalty Patterns," *Housing Policy Debate*, vol. 15, no. 3 (2004), pp. 687–714.

[2] Securitization is a process whereby mortgages are pooled, and then their cashflows are sold as securities (tranches) with different risk characteristics. Some of the risk tranches are designed to be relatively safe, and others can be quite risky; investors can choose according to their preferences and objectives.

[3] Edward M. Gramlich, "Booms and Busts, The Case of Subprime Mortgages" (address given at the symposium "Housing, Housing Finance, Monetary Policy," sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 31, 2007), available at http://www.kansascityfed.org/publicat/sympos/2007/pdf/2007.09.04.gramlich.pdf.

2005 to 3.8 percent in the second quarter of 2007. Although delinquencies have also risen for fixed-rate subprime loans, the level of delinquencies for fixed-rate loans has been lower and its increase has been slower.

Housing markets have weakened throughout the country, but only a few states have had significant increases in foreclosure rates (see Figure 4).

Several factors seem to have contributed to the growing delinquencies of subprime mortgages. Mortgage rates moved upward during the period as monetary policy tightened, and some ARM borrowers may have been surprised at how high their mortgage rate became. Many ARM borrowers appear to have defaulted after the initial period of low rates expired and their monthly payments were reset at significantly higher levels. Such ARM borrowers often found it difficult to refinance their mortgages to avoid increasing payments. In addition, some borrowers who had purchased their home with little money down may have seen their equity vanish as home prices began to decline in some areas. In the industrial Midwest, especially in Michigan, those problems were aggravated by the slowdown of the regional economy as the automotive industry retrenched.

The problems have undermined investors' confidence in the securities backed by subprime mortgages. During the boom years, investors may not have fully appreciated the risks of subprime loans and seem to have underpriced them. Investment managers around the globe were seeking securities that offered higher yields but apparently did not fully appreciate the risks that they were taking on. The price that investors charged for taking on risk in the subprime mortgage market, as well as other financial markets, plummeted to abnormally low levels. The rating agencies, too, appear to have not kept up with some fast-emerging problems in the quality of securities backed by subprime loans, and they may have placed undue emphasis on the unusual period of substantial price appreciation in evaluating the risks of mortgage-related securities. This year, when the risks of subprime mortgages were recognized, the prices for securities backed by them dropped sharply. Liquidity in both the primary and secondary markets for subprime mortgage-backed securities has also declined, as some of the country's largest originators of such loans collapsed.

RISKS TO INDIVIDUALS AND THE BROADER ECONOMY

The shakeout in housing markets has already affected both individuals and the overall economy. House prices have declined in some areas of the country, mortgage delinquencies and foreclosures have risen, and housing investment has fallen dramatically. The effects that have occurred to date, however, may only be the beginning. Even if the economy manages to maintain a fairly steady pattern of growth, many homeowners will face dramatically higher mortgage payments, which will probably lead to additional foreclosures, and some mortgage investors will experience further losses. Moreover, the problems in the subprime mortgage market have spilled over into the broader financial markets, raising borrowing costs for other mortgage and nonmortgage borrowers and threatening to further depress economic activity. Although the consensus forecast for the economy still indicates real growth of about 2-½ percent next year, economists generally agree that the probability of a recession next year has risen and is now quite elevated relative to normal conditions.

Individuals

Mortgage payments, delinquencies, and foreclosures will be a problem for many years as interest rates are reset on prime and subprime ARMs that were originated during the 2004–2006 period. Rates have already been reset for some of those ARMs, and the remaining instances (most of which will occur before the end of 2010) will eventually add about $30 billion to annual payments.[4] Although that increase is not large relative to total household income of $10 trillion, many households will be hard pressed to make the higher payments, and some will become delinquent on their mortgages.

New foreclosures on ARMs have risen over the past year and are likely to remain high for some time. About 1.65 percent of the 8.7 million ARMs (both prime and subprime) included in data tabulated by the Mortgage Bankers Association (MBA) went into foreclosure in the second quarter of this year, about twice the rate during the second quarter of last year. Extending that percentage to all 12.4 million ARMs that were outstanding during the second quarter of 2007 suggests that about 200,000 may have gone into foreclosure.

[4] See Christopher L. Cagan, *Mortgage Payment Reset: The Issue and the Impact* (Santa Ana, Calif.: First American CoreLogic, March 19, 2007).

The rate of new foreclosures in the future depends upon a wide variety of factors, particularly the overall state of the economy and housing prices, so forecasts vary widely—from an additional 1 million over the next few years to more than 2 million. The lower estimates suggest that the pace of foreclosures may slow next year, reflecting the fact that many of the recent foreclosures stem from the expiration of extremely low and very short-term (one- to six-month) teaser rates on some ARMs. Such mortgages will not have as large an effect on the overall foreclosure rates in the future as they have had recently. The higher estimates, however, reflect a concern about the outlook for the overall economy and the possibility that a negative cycle may develop—higher rates of foreclosure may depress housing prices, undermining efforts to refinance mortgages, pushing more homes into foreclosure, and lowering prices further.

Individuals who owned assets that were affected by the recent turmoil in financial markets have experienced losses as a result of the problems in mortgage markets. No data are available about how the losses were distributed among various categories of investors—domestic or foreign, individuals or institutions—nor about how pension funds may have been affected.

The Broader Economy

The problems created by mortgage markets threaten to slow economic activity, possibly by a substantial amount. Four channels exist through which the turbulence in housing markets could affect the broader economy:

• *Reduced Housing Investment.* Between 1995 and 2005, investment in residential housing directly contributed an average of 0.3 percentage points per year to economic growth. The slump in residential housing has already weakened the economy, and more weakness in the housing market could constrain growth further by reducing that source of investment.

• *Less Consumer Spending Based on Housing Wealth.* Lower house prices also are likely to weaken economic activity through the housing wealth effect: Reduced housing wealth causes a decline in consumer spending. The effect could be somewhat larger than expected if households have increased difficulty withdrawing equity from their homes.

• *Contagion in Mortgage and Financial Markets.* Higher mortgage rates and weaker house prices, contributing to higher foreclosure rates and losses for mortgage lenders, threaten to precipitate a spiral of tighter mortgage standards, lower house prices, and more foreclosures. The broader spillover, or contagion, of the subprime mortgage problems into other credit markets, causing stricter standards and terms for other types of borrowing, could reduce economic activity by weakening business investment.

• *A Decline in Consumers' and Businesses' Confidence.* A slowdown in economic activity and employment growth triggered by the problems in mortgage markets, especially if associated with spillover effects in financial markets, could weaken consumers' and businesses' confidence about income growth in the future. Such a reaction could then constrain economic activity further.

Those various channels through which the problems in mortgage markets could spread to the broader economy make the current situation particularly uncertain; the potential effects involving contagion and confidence are especially difficult to evaluate because they depend in part on how financial market participants, consumers, and business executives perceive the situation.

Analysts have lowered their economic forecasts as a consequence of this summer's turmoil in financial markets. In July, the *Blue Chip* consensus anticipated that real GDP would grow by 2.9 percent next year; by September, however, the *Blue Chip* consensus forecast for 2008 had dropped to 2.6 percent. The average growth in the bottom 10 forecasts in the *Blue Chip* survey fell somewhat more—from 2.5 percent to 2.0 percent—but even the average for the bottom 10 forecasts in the *Blue Chip* does not suggest a recession next year. In other words, although the risk of a recession is elevated relative to normal conditions, at least as of now economists generally do not expect a recession next year.

Residential Housing Investment. Investment in residential housing bolstered the economy from the middle of 2003 to early last year, but by that time, the combination of increased mortgage rates and high prices for houses had reduced the affordability of buying a house. Home sales and construction began to falter, and the appreciation in housing prices subsequently slowed. By mid-2007, housing construction activity was 32 percent lower than it had been in early 2006, and by one widely used measure, the national average of housing prices was about 3 percent lower than it had been at its peak. The direct effect of the fall in residential investment reduced real GDP growth in the second half of 2006 and the first half of 2007 by about a percentage point.

The severity of the problems in mortgage markets will exacerbate the decline in residential investment. A few months ago, before the extent of the troubles in the subprime market was recognized, housing analysts generally anticipated a rebound in housing construction during 2008. Now, however, they assume that increased difficulty in arranging financing will cause housing sales and construction to fall much further, perhaps delaying the recovery in the housing market until 2009.

The Housing Wealth Effect. The major factors influencing consumer spending are household income and housing wealth. Greater income and wealth provide consumers with more buying power. The amounts that consumers spend out of their income and wealth vary over their lifetime and vary with the actual and expected pace of economic activity, with interest rates, and with opportunities to borrow, among other things. In recent years, homeowners have been able to easily make use of their housing wealth by using home equity loans and lines of credit and by taking cash out when refinancing their mortgages. The withdrawal of housing equity (net of mortgage fees, points, and taxes) amounted to $735 billion in 2005 and $564 billion in 2006.

A significant amount of uncertainty exists about precisely how much spending changes when wealth changes (known as the marginal propensity to consume out of wealth). Estimates of that parameter range from 2 cents to 7 cents out of a dollar of wealth.[5] So if the value of a home drops by $10,000, the owner might reduce his annual spending by between $200 and $700, if nothing else changes. Some studies find that people adjust their spending more in response to changes in housing wealth than to changes in other forms of wealth, while other studies do not reach that conclusion.

The outlook for home prices is highly uncertain, but it seems likely that house prices will continue to fall next year.

- The inventory of unsold homes stands at record levels, which will place continued downward pressure on house prices in many regions of the country.
- The futures market for the Case-Shiller composite home price index for 10 metropolitan areas expects a decline of about 6 percent over the coming year (see Figure 5).[6] That expectation may not be a reliable guide, however, because those index futures do not trade frequently or in large numbers, so it may not represent a broad consensus of investors. Moreover, the index covers only a relatively few metropolitan areas and, hence, is not indicative of prices nationwide.
- Home prices are still quite high relative to rents by historical standards, although the ratio of house prices to rents is only a very rough guide to the magnitude of possible movements in house prices (see Figure 2). The ratio has risen sharply over the past 10 years and now stands about 60 percent above its average from 1975 to 1998. In the past, when the ratio has deviated from its historical norm, most of the adjustment has occurred in house prices rather than in rents—although that adjustment can take many years.

Although the magnitude of the possible decline in house prices is subject to great uncertainty, the housing wealth effect alone is unlikely to push the economy into a recession. CBO examined two cases (at the low end and the high end of assumptions about the marginal propensity to consume out of housing wealth) of the potential effects of a substantial decline of 20 percent in real house prices over 2 years. At the low end, by the third year, real output would be about 1 percent lower, implying that growth would fall by about one-half of a percentage point per year. At the high end, those effects would more than double; that is, growth could drop by about 1-½ percentage points per year on average (see Figure 6). In neither case would the decline be enough to slow the economy, otherwise growing at something like 2-½ percent per year, into a recession. The Federal Reserve conducted similar experiments using its model and found even smaller effects.[7]

Contagion. The plausible effects of the decline in housing markets through reduced investment in housing and the effects of reduced housing wealth on consumption are thus negative but do not appear to be large enough to tip the economy into

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[5] See Congressional Budget Office, *Housing Wealth and Consumer Spending* (January 2007).

[6] The S&P/Case-Shiller® 10-City Composite Home Price Index tracks changes in the value of residential real estate in 10 metropolitan regions. Futures based on that index trade on the Chicago Mercantile Exchange.

[7] See Frederic S. Mishkin, *Housing and the Monetary Transmission Mechanism*, Finance and Economics Discussion Series No. 2007–40, Federal Reserve Board (August 2007). Both CBO's and the Federal Reserve's analyses assume that the Federal Reserve offsets some of the negative effects of the decline in house prices. In the Federal Reserve's simulation, the federal funds interest rate is more than 1-½ percentage points lower by the end of the third year; in CBO's simulation, the rate is between half of a percentage point and 2 percentage points lower at the beginning of the third year.

recession. If those were the only potential effects of the problems in housing markets on the economy, the risk of a recession would probably not be as elevated as many economists believe it currently is. The turbulence in housing markets could have other effects on the economy, though.

For example, some economists are concerned about the adverse impacts on growth that could occur if the problems in the subprime mortgage market continue to spread to other credit markets. That is indeed a serious risk to the economic outlook. The possibility of such contagion initially upset financial markets in the spring of this year, when the problems in the subprime market first surfaced. Markets were further roiled in July and August following the failure of several hedge funds that had invested heavily in subprime securities, concerns over some European banks' contingent liabilities for similar types of hedge funds, and the arrival of other news on the depth of the problems in mortgage markets. Because of a lack of clear information about who holds those subprime investments in their portfolios, investors often do not know who has exposure to the losses in the subprime market. That confusion has led to a repricing of risk in general, which has affected valuations and interest rates on a wide variety of investments—prices of risky assets fell, whereas prices of Treasury securities rose. That repricing followed a period in which risk spreads had been unusually low.

Price changes in the market for assets collateralized by subprime mortgages have been dramatic. Financial institutions issue mortgage-backed securities (MBSs) to investors with the payments of interest and principal tied to the payments made by subprime borrowers. MBSs are structured to create multiple classes of claims, or seniority, on the cash-flows from the underlying mortgages. Investors holding securities in the safest or most senior tranche (AAA) stand first in line to receive payments from borrowers (and expect to receive a correspondingly low return). Investors holding the least senior securities stand last in line to receive payments after all more senior claims have been paid. Hence, they are first in line to absorb losses on the underlying mortgages. In return for assuming that risk, holders of less senior, lower-rated claims expect to receive correspondingly higher returns.

As of mid-August, the prices of the riskiest tranche of mortgages issued in 2006 and early 2007 had fallen to 40 cents or less on the dollar, but the prices of the safest tranche were above 90 cents on the dollar. Prices of tranches based on mortgages issued earlier, in the last half of 2005, ranged from 60 cents for the BBB-tranche (the lowest investment grade) to almost 97 cents for the AAA tranche, indicating that the worst losses seem to apply to originations made in 2006 and early 2007.

Difficulties in the subprime mortgage market spread to jumbo mortgages, which are those that exceed the maximum size of a mortgage that Fannie Mae and Freddie Mac are eligible to purchase. That amount, which is also known as the conforming limit, was $417,000 in 2007. As problems in the market for financing subprime mortgages became more apparent, investors began to demand much higher premiums on jumbo mortgages, raising interest rates on them. In addition, the terms of those jumbo loans tightened, as many lenders began to require larger down payments and higher credit scores. By contrast, mortgage rates on conforming loans have actually declined, as they have benefited from a "flight to quality." Moreover, prime borrowers are not having significant difficulties in obtaining credit for loans under the conforming limit.

The contagion has spread beyond mortgage markets, leading to higher interest rates on various types of business borrowing. One indication is the change in the differences, or spreads, between interest rates on corporate bonds and the rate on 10-year Treasury notes. To date, the increase in spreads on riskier bonds (those with lower credit ratings) has been substantial and greater than the increases on less risky bonds (see Figure 7). Much of the recent increase, though, simply brings the spreads of risky assets back to more normal levels. That is, investors appear to have been underpricing risk for some time, and the jump in the riskiest rates in recent months brings them up to levels that are still low relative to those in more serious episodes of credit restraint, during the fall of 1998, for instance, when the Long-Term Capital Management hedge fund failed, and at the end of 2000, when the stock market started to fall.

Serious problems have appeared in the riskier end of the market for commercial paper. The commercial paper market is an important source of short-term funds for businesses; in July, the outstanding amount of commercial paper was almost $2.2 trillion (see Figure 8). Interest rates on the lower grade A2/P2 and assetbacked paper rose sharply during the turmoil in financial markets in August (see Figure 9), when holders of the asset-backed paper became concerned that the underlying assets might include very risky subprime mortgages. The underlying collateral was difficult to value because the market for trading subprime loans was never liquid

to begin with, and is less so now. The amount of commercial paper outstanding fell by an unprecedented $260 billion in August, with most of the drop in asset-backed paper.

The difficulties in some segments of the credit markets are relatively easy to observe through price spreads or ratings downgrades. Other market segments, however, may have shifted substantial portions of risk from subprime mortgages through private transactions that were not evaluated by rating agencies. The publicly traded participants to those transactions will disclose the impact on their earnings statements, but depending on the structure of the transactions involved, the process for valuing losses may take months.

The problems in the credit markets have resulted in a shortening of the maturity structure of commercial paper and a big jump in term premiums for asset-backed paper with maturities longer than a week. Those large premiums indicate that investors are quite uncertain about what will happen to the market for that paper. One test for the asset-backed commercial paper market in coming weeks is the large fraction of the outstanding paper that matures and must be rolled over. About 44 percent ($418 billion) of the asset-backed commercial paper outstanding in early September will mature by September 21, and 73 percent ($688 billion) by October 19. If investors' demand for that paper is insufficient, issuers will have to find other sources of funds to finance their assets.

Consumer and Business Confidence. The turmoil in credit markets could also affect the broader economy through a decline in consumer and business confidence about future economic activity. To be sure, those consumers and businesses directly affected by the turmoil may already have lowered their expectations of the future economic activity. Diminished expectations by other consumers and businesses, which would show up in the aggregate data for gauging confidence, would be a signal that a broader slowing of economic activity may be in the offing. To date, consumer confidence has held up fairly well even though problems in housing markets have been building up for the past year (see Figure 10). Results from the Business Roundtable's Economic Outlook Survey appeared consistent with a broad slowing in the economy, but not with the kind of collapse in business spending that could precipitate a recession. Notably, the survey was conducted between August 20 and September 5, the period of greatest disruption in the commercial paper market. Also, the Index of Small Business Optimism, based on a survey conducted by the National Federation of Independent Businesses, fell slightly in August, but it is not much lower than its average of the last 6 months. By contrast, investors' optimism, as measured by the UBS/Gallup index, dropped sharply in August, falling 14 points, to 73, its lowest level in 12 months.[8]

POLICY RESPONSES

Three objectives appear dominant in current policy proposals for addressing the financial difficulties originating in the subprime market: sustaining the overall economy; helping homeowners facing foreclosures; and preventing future crises by reducing the chances of a recurrence of financial instability, while keeping the subprime market open.

In evaluating policies to achieve those goals, it is important to recognize that not all current housing and credit policies are broken. Some are working well. The challenge is to find ways of correcting the abuses and instability that are now becoming apparent while strengthening successful institutions and continuing the benefits of market innovation.

Sustaining the Overall Economy

One of the central goals for policy is to limit the potential effects of turmoil in the subprime market on the economy as a whole. The Federal Reserve, as the lender of last resort, is the institution that is best placed to take action to meet that goal.

The Federal Reserve faces two problems. The most immediate is to stabilize credit markets, especially to avoid problems with liquidity that could emerge if commercial borrowers (including those unrelated to the housing industry) have difficulty refinancing their short-term debt as it matures. That problem is short term and will diminish as financial markets develop ways to assure investors of the quality of borrowers. Market participants are already discussing ways to improve such transparency.[9] Traditionally, the Federal Reserve has provided that liquidity for banks at times such as these. Some economists have noted that with changes in the finan-

[8] The UBS/Gallup Index of Investor Optimism, published monthly, is available at www.ubs.com.

[9] See Reuters, London, "ESF Head Sees Investors Returning to Asset-Backed CP," September 13, 2007.

cial system, the Federal Reserve may need to extend liquidity to others, although other economists have noted that such a change would represent a fundamental shift in the conduct of monetary policy and would need to be carefully evaluated before being adopted.

The second problem is to stabilize the economy, which the Federal Reserve tries to do by adjusting its target for the interest rate on federal funds. That adjustment requires an estimate of how much the turmoil in subprime mortgages will affect the broader economy. As noted above, such estimates are quite uncertain. Moreover, while the Federal Reserve's actions to provide liquidity work quickly, there is a considerable lag between changes in interest rate targets and their effects on the economy.

The Federal Reserve and other central banks have already taken steps to help limit the spillover of the problems in the subprime market to other financial markets. In August, the Federal Reserve provided liquidity for the financial system in a timely manner and helped prevent the collapse of a few markets from quickly spreading to other parts of the financial system: It allowed the actual federal funds rate to move below its target level as a result of the injection of liquidity. It lowered the discount rate, though that move initially led to very little additional borrowing. It has also reiterated its ongoing commitment to financial stability, suggesting in recent statements that it might be willing to go beyond the ordinary tools of monetary policy if the problems in the market prove recalcitrant. (Although the Federal Reserve was not specific about what it might do, some people have discussed providing liquidity in other parts of the market, beyond the interbank market in which it normally operates.)

Especially in the face of the significant uncertainties in the economic outlook, but more broadly as a matter of principle, there appears to be significant benefit in allowing the Federal Reserve the independence to evaluate macroeconomic tradeoffs as best it can. At its September 18 meeting, the Federal Reserve lowered the discount rate and its target for the federal funds rate by 50 basis points.

Aiding Borrowers Facing Foreclosure

A second major goal for policy may be to aid borrowers who are facing the possibility of foreclosure. Because most of those foreclosures stem from homeowners with adjustable-rate mortgages, most of the options involve increasing opportunities for those borrowers to restructure their debt in a manner that reduces their debt-service burden and shares the cost among the parties to the transaction: the homeowner, the lender, and participants in the secondary market.

Such opportunities could be created in a variety of ways. For example, federal financial regulators have sought to encourage lenders to consider refinancing the mortgages of troubled borrowers as an alternative to the costly process of foreclosure. Another possibility is to expand the use of community-based organizations, such as community development corporations and community development financial institutions, which provide services, counseling, and foreclosure protection to households. In his recent book, Edward Gramlich described the role of such organizations and the possibilities for expanding their work given the turmoil in the mortgage market.[10]

In addition, the Administration has made changes to federal regulations that govern the Federal Housing Administration (FHA) to make such refinancing easier. Specifically, the new FHASecure plan modifies the existing rules for the agency's mortgage insurance and increases opportunities for some homebuyers to refinance their mortgages on more affordable terms. For those buyers who can meet FHA's existing underwriting standards but cannot afford to service their existing mortgages, the policy will avoid the high cost of foreclosure.

The FHASecure policy is unlikely to be a solution for all subprime borrowers with high-cost ARMs, however. Many of those at risk will be unable to meet FHA's eligibility requirements, including a 3 percent down payment and full documentation of income. In addition, refinancing troubled ARMs may be hampered by heavy penalties for prepayment. Finally, the ability of lenders to renegotiate and refinance existing mortgages is restricted by tax provisions intended to limit the role of lenders in the operation of trusts that hold the mortgage pools backing the MBSs.

In providing assistance to vulnerable households, it is important to strike an appropriate balance between reducing the harm to homeowners and inappropriately signaling that the government will make whole future borrowers who place risky bets in housing markets. As Douglas Elmendorf of the Brookings Institution has noted, ". . . some struggling borrowers are the victims of predatory lending prac-

[10] Edward M. Gramlich, *Subprime Mortgages: America's Latest Boom and Bust* (Washington, D.C.: Urban Institute Press, 2007).

tices, and others entered into mortgage contracts they did not fully understand. Others knew what they were doing and deliberately took risks, but we should still be sympathetic to low-income people who would have their lives disrupted by losing their homes, giving up any equity in their homes, and damaging their credit histories. That said, our economic system of letting people make their own decisions is sustainable only if people bear the consequences of those decisions. . . . Moreover, helping people who took risks and lost can encourage excessive future risk-taking."[11]

Regulatory and Administrative Changes. The Administration and federal financial regulators have begun to take steps to help defaulting borrowers using the legal authorities that they already have.

In addition, the Congress could consider a variety of legislative approaches, most of which would probably have a budgetary cost. One possibility is to reduce the burden on distressed borrowers by changing the tax code. Other approaches could include facilitating refinancing of distressed loans, either directly through government lending programs or indirectly by guaranteeing those loans.

Eliminating the Tax on Debt Forgiveness. The Administration has proposed a Debt Relief Liability Waiver, which would eliminate the tax liability for debt forgiveness. Under current law, loan forgiveness is taxable income to the recipient. Therefore, loan balances that are forgiven as a part of a debt restructuring are taxable to borrowers. Similarly, a shortfall between the value of a foreclosed property and the remaining balance on the mortgage is currently considered income to borrowers and is taxed. Legislation to waive that tax liability could provide assistance to financially troubled borrowers, but the waiver would need to be crafted carefully to avoid the gaming that could result. For example, if the waiver were too general, a firm could give a loan to a worker (rather than taxable wages) and then forgive the principal.

Expanding FHA's Guarantees. Increasing the size limit on mortgages eligible for FHA's guarantees to 100 percent of the conforming loan ceiling would make it possible for some current homeowners with mortgages up to $417,000 to refinance with a guarantee from the agency, provided they can meet the eligibility requirements. Additional borrowers could be assisted by easing those requirements and by reducing the guarantee fees for those refinanced mortgages. However, expanding the government's portfolio of loan guarantees could prove costly to the government, even though beneficial to borrowers.

Easing Restrictions on Fannie Mae and Freddie Mac. The secondary, or resale, market for low-risk first mortgages of $417,000 or less is dominated by the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac. With the support of an implicit federal guarantee of their debt and other liabilities, those enterprises have privileged access to funds in the capital markets. In fact, during times of financial turmoil and uncertainty when there is often a "flight to quality" by investors, the securities issued by those entities are favored investments.

Some legislative proposals would increase the maximum mortgage size that housing GSEs are permitted to purchase, from $417,000 to $500,000 nationally and to $625,000 in designated high-cost areas. The aim of the proposal is to increase demand by investors for jumbo mortgages, for which the availability of funds has been limited and interest rates have risen in recent months.

Another proposal would raise the maximum size of loans that could be purchased by Fannie Mae and Freddie Mac. In addition, some variations of that proposal would increase current limits on the dollar volume of mortgages and mortgage-backed securities that Fannie Mae and Freddie Mac could hold as investments rather than reselling them to investors as guaranteed asset-backed securities. The current limits were imposed on the housing GSEs by the federal safety and soundness regulator, the Office of Federal Housing Enterprise Oversight, in response to the accounting scandals at the enterprises last year. Former Treasury Secretary Lawrence Summers has proposed expanding the GSEs' securitization of subprime mortgages (and perhaps also expanding their holdings of such mortgages).[12] That approach could be implemented in conjunction with an increase in the dollar limits on the GSEs' portfolios.

Adopting those proposals could increase the demand for mortgages and lower interest rates on them. However, the proposals also raise concerns about an increase in risk to the financial system (and perhaps implicitly to the federal budget) from

[11] Douglas W. Elmendorf, "Notes on Policy Responses to the Subprime Mortgage Unraveling," The Brookings Institution, September 17, 2007, available at www.brookings.edu/views/papers/elmendorf200709.htm.

[12] Lawrence Summers, "This Is Where Fannie and Freddie Step In," Financial Times, August 26, 2007.

further concentrating mortgage holdings in enterprises that have problems with financial controls and accounting capabilities. Shifts in the GSEs' portfolios with a given aggregate cap would raise the demand for some types of mortgages and reduce the demand for other types. Creating new refinancing opportunities directly through a federal agency such as FHA, rather than the for-profit housing GSEs could also improve the targeting of assistance to those families with the greatest need.[13]

Encouraging Other Solutions. Federal regulators might encourage solutions, such as renting defaulted homes back to the homeowners, that both minimize the disruption for them and provide an income stream for investors.[14] That sort of solution was probably easier to achieve when mortgages were held by the issuers; with ownership widely spread through tranches of pooled mortgages, it might be difficult to get agreement among all parties, absent regulatory encouragement. It may also prove difficult to make sure that renters take proper and sufficient care of their previous homes.

Preventing Future Crises

Preventing future crises is a third important goal for policy. Two broad approaches could be taken: addressing deceptive lending practices and improving regulation of the subprime market.

Other areas that policymakers may want to revisit, but that pose difficult tradeoffs, involve the role of the rating agencies and regulation of hedge funds and private equity funds. The incentives of rating agencies may not be adequately aligned with investors purchasing securities. Former Chairman of the Securities and Exchange Commission (SEC) Arthur Levitt, for example, has proposed a variety of measures to realign incentives in the rating agency market (for example, by requiring in debt-offering documents full disclosure about consulting advice from related parties and imposing SEC's oversight of the agencies). Other observers have called for increased regulation of hedge funds and private equity funds.

Although the government may need to take important and relevant steps to reduce the risk of future crises, the private sector also has an incentive to limit such risk. Financial losses being incurred by lenders and investors are forceful reminders of the enduring need to adhere to basic standards of prudence in underwriting and evaluating risk.[15] The consequences of the current disturbance for investors may help to avoid a recurrence of the worst excesses of recent years.

Addressing Deceptive Practices. For the federally chartered and regulated financial institutions, the Federal Reserve has authority under the Truth in Lending Act and the Home Ownership Equity Protection Act (HOEPA) to require specific provisions in mortgage contracts and to prohibit practices deemed "unfair" or deceptive.[16] Currently, the Federal Reserve is reviewing proposals that would require lenders to include in monthly repayments and escrow accounts amounts sufficient to pay taxes and insurance on mortgaged properties, as most prime lenders do routinely. The Federal Reserve is also considering rules that would restrict or prohibit prepayment penalties when payments under ARMs are reset and loans are made without documentation that verifies the borrower's income. The coverage of HOEPA could also be expanded. For example, Edward Gramlich proposed reducing the interest rate threshold at which HOEPA applies from 8 percentage points to 5 percentage points above the Treasury bond rate on comparable securities; he noted that such an expansion may partially supplant the variety of regulations that have been adopted by about 40 states.

Prosecution of fraudulent lenders and mortgage brokers by federal and state authorities under current law (including HOEPA) is likely to reduce the recurrence of the most abusive, illegal practices in the future. Some legislative proposals would also hold mortgage originators and investors in mortgage-backed securities liable for loan terms defined in legislation as "abusive." Such consumer protection initiatives can prevent some uninformed borrowers from agreeing to disadvantageous terms and teaser rates, but they also restrict the ability of lenders to tailor mortgage terms to the legitimate needs of some borrowers. For example, prohibiting prepayment penalties may help protect unsophisticated households from entering contracts

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[13] See Elmendorf, "Notes on Policy Responses."

[14] See Dean Baker and Andrew Samwick, "Save the Homeowners, Not the Hedge Funds," *Providence Journal*, September 3, 2007.

[15] Those developments have also exposed weaknesses in some relatively new financial structures, such as structured investment vehicles (SIVs), which are a means of deriving profit from the difference between short-term borrowing rates and long-term rates. SIVs may use subprime loans as collateral when issuing asset-backed commercial paper. When banks create them, they are usually kept off the balance sheet, adding to problems in the interbank market.

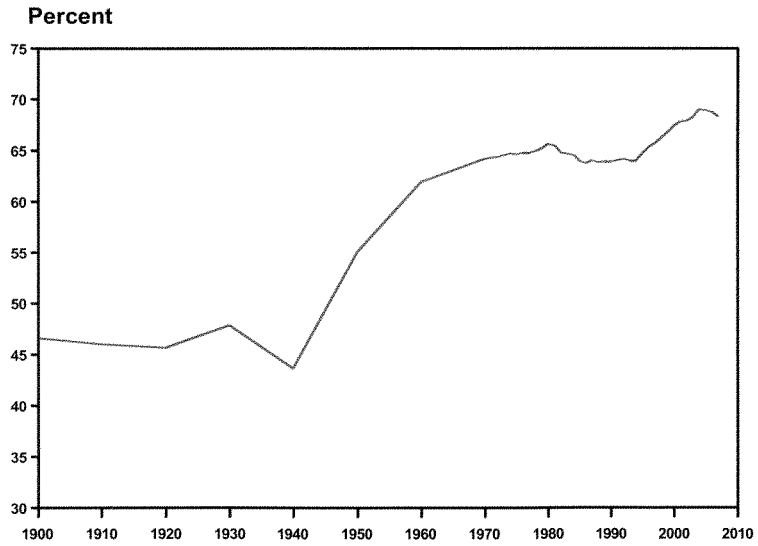
[16] Ben S. Bernanke, "The Sub-Prime Market" (address at the Federal Reserve Bank of Chicago's Annual Conference on Bank Structure and Competition, May 17, 2007).

that lock them into excessively costly payments—but it may also allow higher-quality borrowers to refinance more rapidly than lower-quality borrowers, thereby causing a reduction in the average quality of the mortgage pool and forcing investors to charge a higher interest rate on the mortgages in the first place.

Improving Regulation of the Subprime Market. Over the longer term, the subprime mortgage finance industry may require more uniform regulation. Currently, about half of all subprime mortgages are originated by lenders subject to federal safety and soundness regulation. The other half of the market is made up of state-chartered independent mortgage lenders and brokers. Some, but not all, of the latter group are subject to effective operating oversight and consumer protection by state regulatory authorities. Those lenders and brokers who operate outside of effective government-imposed regulation or industry self-regulation are the source of much, though not all, of the fraudulent and abusive practices that have come to light as a result of the current wave of defaults and foreclosures. More uniform regulation of those entities would be consistent with both fair competition and consumer protection.

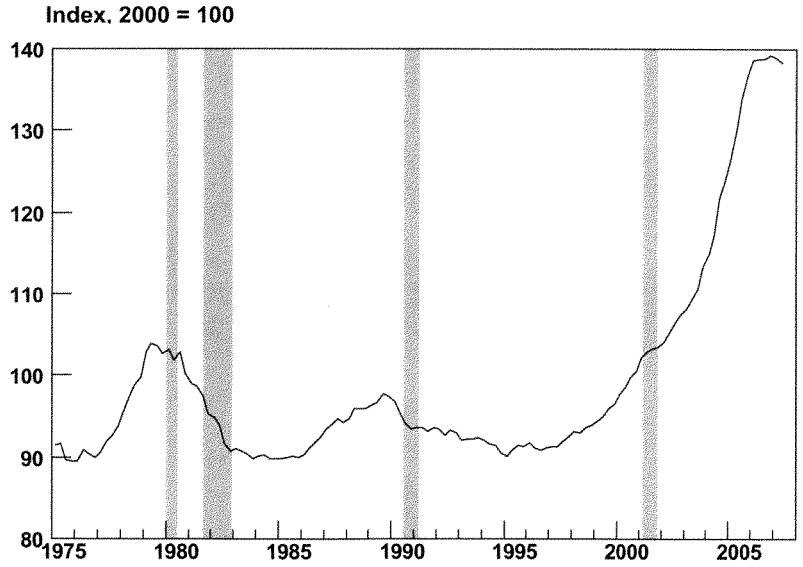
Investors' interest in increasing the transparency of the operations of structured finance entities, including the pooling of subprime mortgages in a trust for the purpose of selling various classes of ownership shares in the pool to investors, has been reported in the press. To date, however, no legislation has been introduced for that purpose. In general, the creators of structured finance vehicles have strong incentives to meet investors' needs for information and to maintain low-cost access to the capital markets. Current deficiencies in the information provided by such entities to investors may be self-correcting.

Figure 1. U.S. Home Ownership Rate



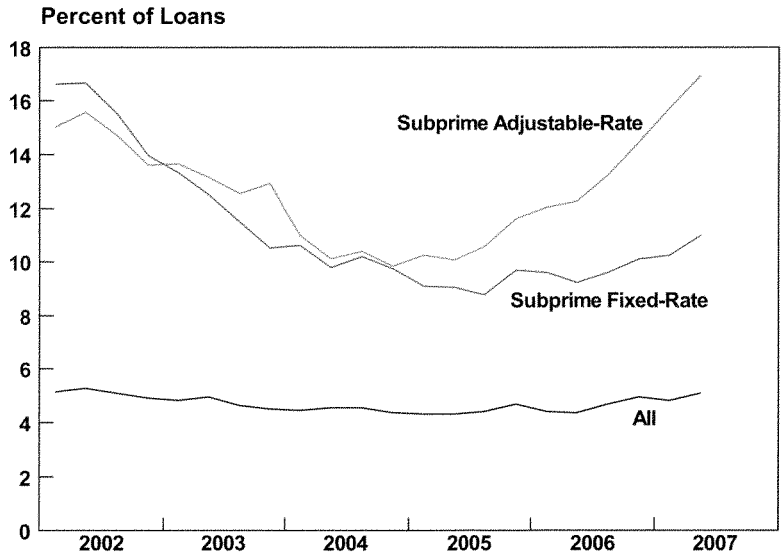
Sources: Congressional Budget Office; Bureau of the Census.
Note: Data are for census years from 1900 to 1960 and annual from 1970 to 2007. 2007 is an average of the first two quarters.

Figure 2. Ratio of House Prices to Rents



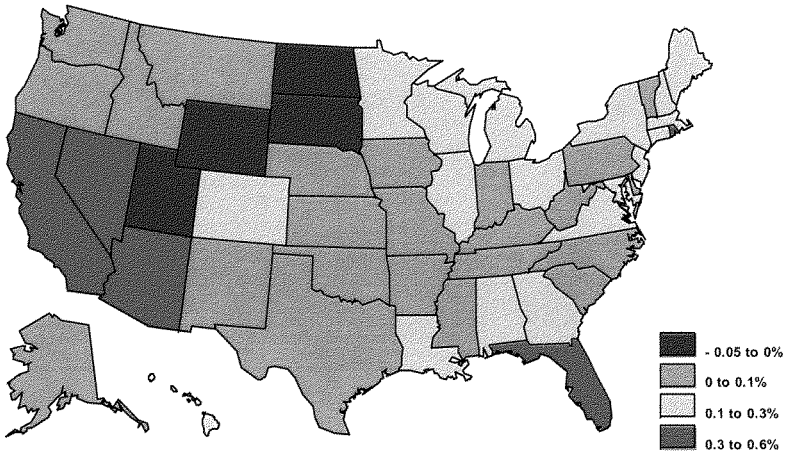
Sources: Congressional Budget Office; Office of Federal Housing Enterprise Oversight; Department of Commerce, Bureau of Economic Analysis.
Note: Data are quarterly and are plotted through the second quarter of 2007.

Figure 3. Mortgage Delinquencies



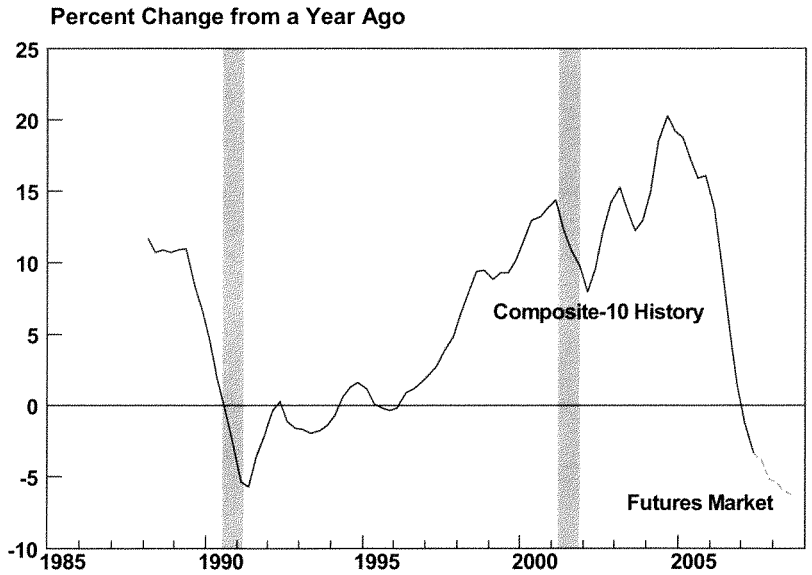
Sources: Congressional Budget Office; Mortgage Bankers Association.
Notes: Data are quarterly and are plotted through the second quarter of 2007.
Delinquent mortgages are those with payments more than 30 days overdue.

Figure 4. Change in the Foreclosure Rate by State, 2006Q2 to 2007Q2



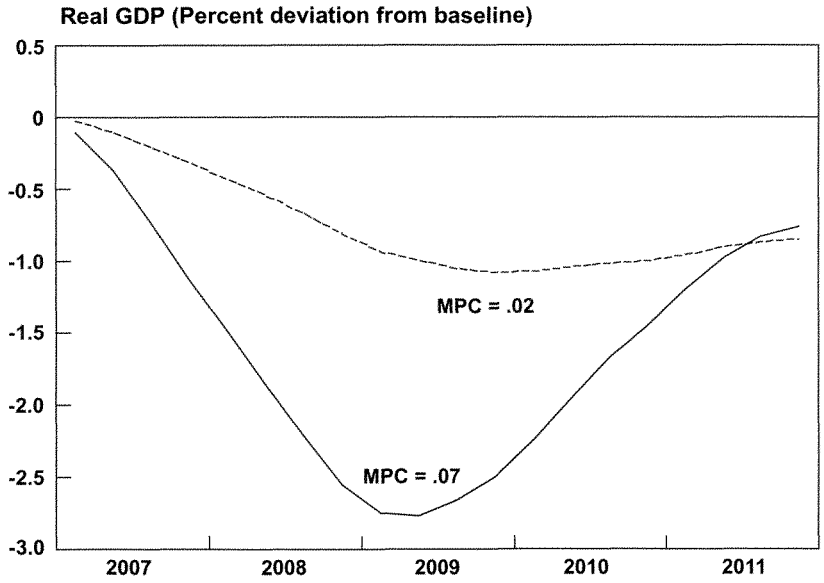
Sources: Congressional Budget Office; Mortgage Bankers Association.

Figure 5. Case-Shiller Home Price Index and Futures Market



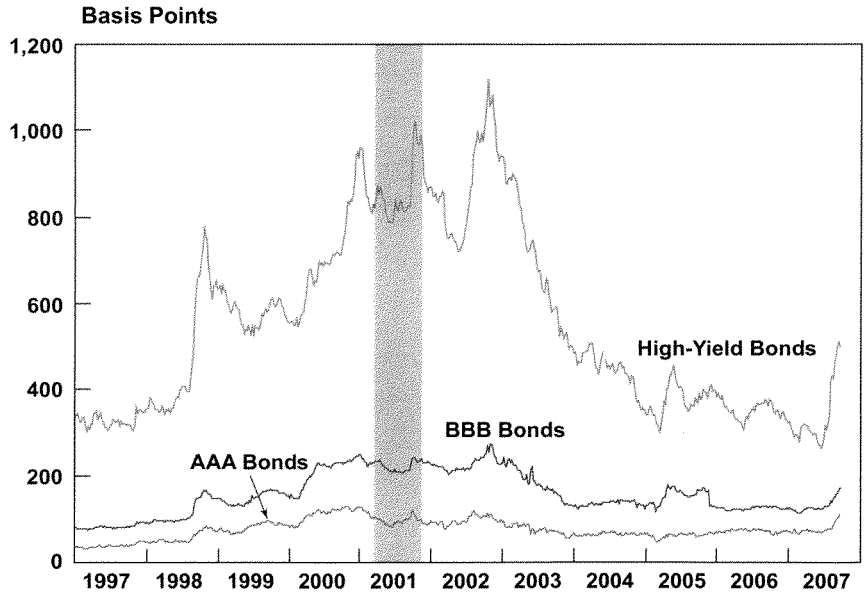
Sources: Congressional Budget Office; Bloomberg.
Note: Includes futures contracts from 2007Q4 to 2008Q3.

Figure 6. Simulations of a 20 Percent Decline in House Prices



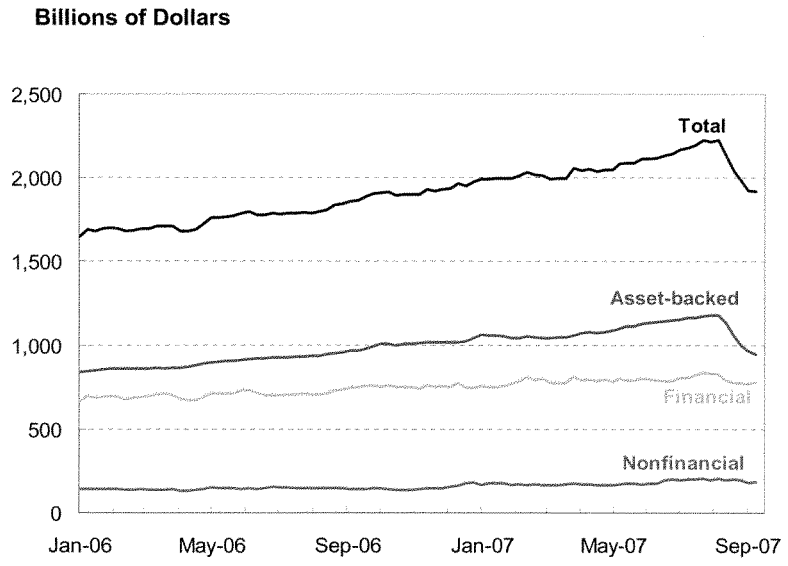
Note: MPC = Marginal propensity to consume out of wealth.

Figure 7. The Yield Spread Between Corporate Bonds of Various Ratings and the 10-Year Treasury Note



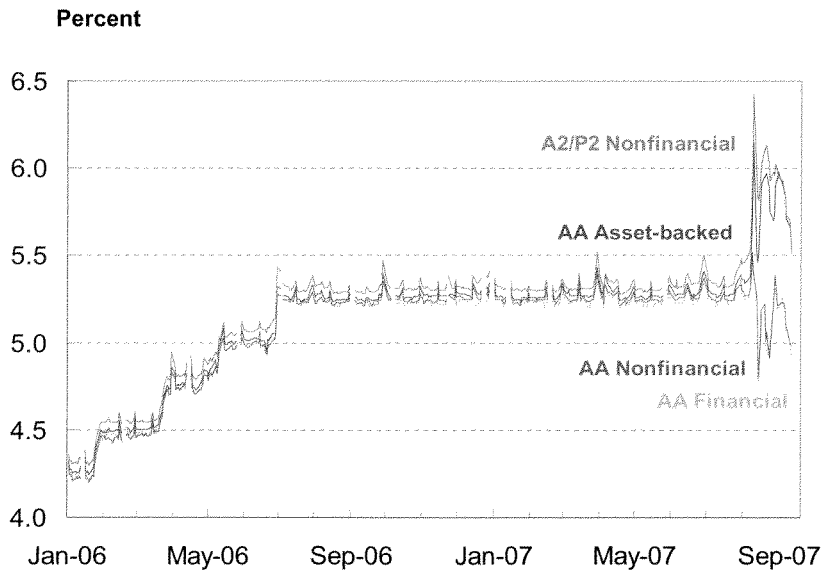
Sources: Congressional Budget Office; Bloomberg.
Note: Data are weekly and are plotted through September 14, 2007.

Figure 8. Commercial Paper Outstanding



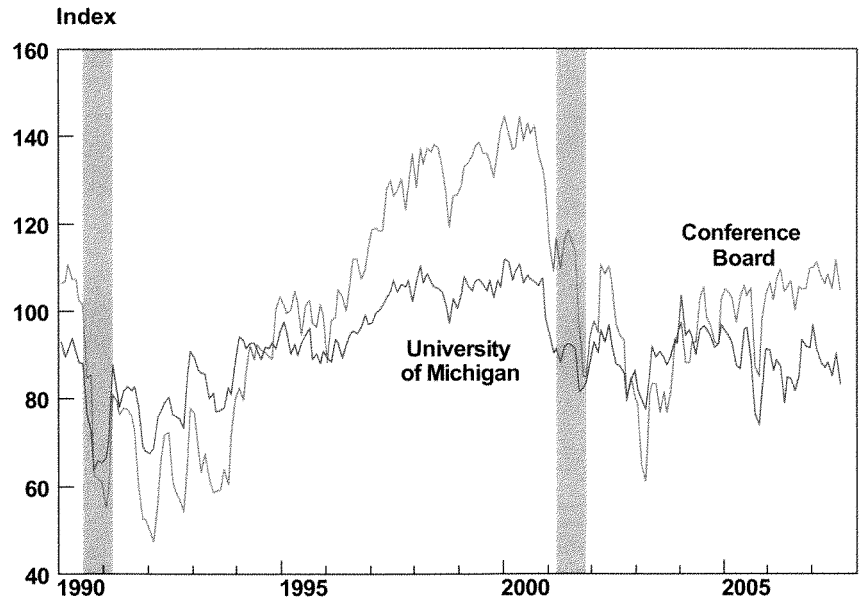
Source: Congressional Budget Office based on data from the Federal Reserve.
Note: Data are weekly and are plotted through September 12, 2007.

Figure 9. Overnight Commercial Paper Rates



Source: Congressional Budget Office based on data from the Federal Reserve.
Note: Data are daily and are plotted through September 12, 2007.

Figure 10. Consumer Confidence



Sources: Congressional Budget Office; University of Michigan; Conference Board.
Note: Data are monthly and are plotted through August 2007.

PREPARED STATEMENT OF ROBERT J. SHILLER, STANLEY B. RESOR PROFESSOR OF ECONOMICS AND PROFESSOR OF FINANCE, YALE UNIVERSITY; CO-FOUNDER AND CHIEF ECONOMIST, MACROMARKETS LLC; RESEARCH ASSOCIATE, NATIONAL BUREAU OF ECONOMIC RESEARCH

Mr. Chairman and members of the committee, I thank you for the opportunity to testify today. My name is Robert Shiller, and I am Professor of Economics and Finance at Yale University, author of the books *Irrational Exuberance* and *The New Financial Order*, Research Associate, National Bureau of Economic Research, and Co-founder and Chief Economist, MacroMarkets LLC.

In my lectures at Yale, my books, public appearances, and business dealing with the financial products as a principal in the firm MacroMarkets LLC, I have been a strong advocate for financial innovation. Financial innovation has the potential to reduce economic risks and promote economic growth. But at the same time I have argued for many years that despite financial innovations, what Allan Greenspan termed "irrational exuberance," that is irrational optimism about investments and economic prospects, can substantially disrupt financial markets from time to time.

The roots of the current subprime crisis involve the impact of both financial innovations and irrational exuberance. Rapid financial innovation has been a good thing overall, but it has caused some mistakes to be made, mistakes that are associated with the immense speculative booms we have recently observed in the market for single family homes.

1. The Recent Boom in Housing Prices

The most important cause of our current crisis is the housing boom that preceded it. The U.S. has, since the late 1990s, had its biggest national housing boom in history. I believe that the boom was driven by the expectations of home purchasers that further price increases were likely, if not inevitable. Thus, home buyers were willing to pay ever higher and higher prices to participate in the perceived bonanza.

Booms tend to produce financial innovations. They also produce excesses such as the decline in lending standards that generated the subprime crisis.

Figure 1 shows the dimensions of the boom according to the U.S. National S&P/Case-Shiller Home Price Index, which is produced by Fiserv Inc using methods that Karl Case of Wellesley College and I originated. The U.S. housing market gained 86% in real inflation-corrected value from 1998 to the peak in early 2006. In my view, this degree of asset value inflation was unwarranted, and driven by excessive investor enthusiasm for housing as an investment. Since the peak, it has lost 6.5% of its real value.

Note from Figure 1 that neither the rise of home prices to 2006 nor the fall thereafter can be attributed to changes in the rental market for homes or to changes in building costs. That is part of the reason why I believe that the home price changes are basically speculative, and, I believe, driven by market psychology.

The futures market for single family homes at the Chicago Mercantile Exchange that I and my colleagues at MacroMarkets LLC helped establish last year has been in backwardation, that is, it has been implying further declines in home prices. If one corrects for inflation, it can be interpreted as predicting another 7% to 13% decline in real value by August 2008, depending on city beyond the 6.5% we have already experienced. Since the asset values in the housing market are so large (approximately $23 trillion) this amounts to a real loss of home value on the order of trillions of dollars by August 2008.

2. Impact of the Subprime Lending Fallout on the U.S. Economy

While the media has focused on lax and irresponsible lending standards, I believe that this loss in housing value is the major ultimate reason we see a crisis today. The decline in house prices stands to create future dislocations, like the credit crisis we have just seen, if home prices continue to fall. Notably, mortgages tend to default and end in foreclosure after home prices fall, since people who have purchased homes when prices were very high may see their houses now have negative net worth and, perceiving further falls coming, they no longer have the motivation to struggle to make payments. Thus, the problem is larger than simply the group of home buyers who have subprime mortgages.

Although mortgage bondholders and servicers may mobilize unprecedented resources for loan work-outs, we are very likely to see higher foreclosures in the future. Programs like FHASecure, which appear to be focused only on assisting home owners with positive equity, will not stem the rising tide of defaults.

Declines in residential investment have been an important factor in virtually all recessions since 1950, as is shown in Figure 2. The last time we saw such declines, in 1990–91, there was a U.S. and worldwide recession, of rather short duration, but followed by a weak economy for several years. The housing boom since the late

1990s was clearly bigger than the one that preceded the 1990–91 recession, and the contraction in residential investment since last year is sharper.

I am worried that the collapse of home prices might turn out to be the most severe since the Great Depression. It is difficult to predict the depth, duration and all of the consequences of such a decline operating in a much more complex modern economy.

My own research, with Karl Case and John Quigley, has shown a strong effect of housing prices on people's spending historically, which would suggest that consumption spending would contract as home prices fall. But, even beyond the effects that we have found in past cycles, the bursting of the housing euphoria, and the attendant financial crises, may bring on a further loss of consumer confidence, given the size of the price drops and media attention the current crisis has been generating.

There is a significant risk of a recession within the next year. The Federal Reserve will undoubtedly take aggressive actions, which will mitigate its severity. But, if home price deflation persists or intensifies, they may discover that the Achille's Heel of this resilient economy is the evaporation of confidence that can accompany the end of boom psychology.

3. Effects on Home Ownership Levels

The promotion of homeownership in this country among the poor and disadvantaged, as well as our veterans, has been a worthy cause. The Federal Housing Administration, the Veterans Administration, and Rural Housing Services have helped many people buy homes who otherwise could not afford them. Minorities have particularly benefited. Home ownership promotes a sense of belonging and participation in our country. I strongly believe that these past efforts, which have raised homeownership, have contributed to the feeling of harmony and good will that we treasure in America.

But most of the gains in homeownership that we have seen in the last decade are not attributable primarily due to these government institutions. On the plus side, they have been due to financial innovations driven by the private sector. These innovations delivered benefits, including lower mortgage interest rates for U.S. homebuyers, and new institutions to distribute the related credit and collateral risks around the globe. Unfortunately, as the distance between originators and the ultimate investors in subprime assets grew and risk was managed more efficiently, so too did the underwriting complacency.

The layered risks and opacity of certain securities backed by recent vintage subprime mortgages are unprecedented. Riskier mortgage products—such as those entailing a low down-payment, negative amortization, limited documentation, no documentation, payment options, adjustable rates, and subprime credit—have been offered for decades by portfolio lenders and specialty finance companies. However, in the past few years alone, individual loans with a growing combination of these risks have been promoted, originated, funded, and securitized in the mainstream of mortgage finance. The housing boom and the global appetite for outsized returns enabled a large playing field to develop quickly. The rules of the game were loose and untested, and play was largely unregulated.

A sharp distinction should be made between promoting home ownership for low income individuals and promoting home ownership in general. We do not need to feed the housing boom any more, or to bail out middle income people who tried to make huge profits in the housing boom.

It is among lower-income Americans that the crisis is most severe. Indeed, according to the three-tier Fiserv/Case-Shiller Home Price Indices that track appreciation rates by price segment for major cities, the housing boom since 1998 has been more pronounced for affordable concentrated in low price homes than high-price homes. This fact is consistent with our observation that the growth of subprime loans has been an important driver of home prices. It also suggests that lower-priced homes may therefore fall further if the contraction continues, setting the stage for disproportionate negative wealth effects for American making the contraction in home owners with low incomes especially burdensome.

4. Some Recommendations

The FHA, the GSEs, private mortgage investors and mortgage servicers should be incentivized to further assist the lower-income and minority borrowers and others who have been victimized by fraudulent and predatory lending practices in the recent boom. We should create, along lines advocated by Harvard Law professor Elizabeth Warren, a Financial Product Safety Commission, patterned after the Consumer Product Safety Commision, to deter poor lending practices in the future. Formal safeguards against the practices and influences that generate systematic home

appraisal inflation are also long overdue in the mortgage lending industry. We should, at the same time, promote other risk managing innovations in housing, such as home equity insurance, shared equity mortgages, home price warranties, and down-payment-insured home mortgages. All of these risk-management vehicles will help mitigate the severity of impact on individual homeowners when we next encounter a boom-bust cycle in home prices.

5. Attachments

I attach two recent papers of mine that expand on ideas in this testimony. The first is "Understanding Recent Trends in House Prices and Home Ownership" which was presented at "Housing, Housing Finance, and Monetary Policy," an economic symposium sponsored by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming, on August 31–September 1, 2007. The second is "Low Long-Term Interest Rates and High Asset Prices" which was presented at the "Celebration of Brookings Papers on Economic Activity" Conference, Brookings Institution, Washington DC, September 6 and 7, 2007.

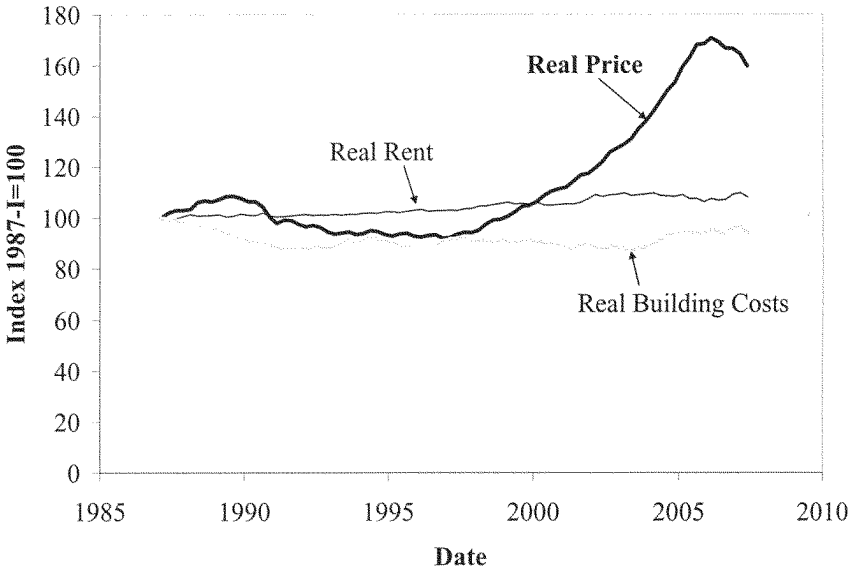


Figure 1: Real US Home Prices, Real Owners Equivalent Rent, and Real Building Costs, quarterly 1987–I to 2007–II. Source: Robert J. Shiller: "Understanding Recent Trends in House Prices and Home Ownership" Federal Reserve Bank of Kansas City Jackson Hole Symposium, September 2007 [attachment to this testimony]. Real US Home Price is the S&P/Case-Shiller U.S. National Home Price Index deflated by the Consumer Price Index (CPI-U) for the first month of the quarter rescaled to 1987–I=100. Real Owners Equivalent Rent is the U.S. Bureau of Labor Statistics Owners Equivalent Rent December 1982=100 from the CPI-U divided by the CPI-U, all items, 1982–4=100, both for the first month of the quarter, rescaled to 1987–I=100. Real building cost is the McGraw-Hill Construction/Engineering News Record Building Cost Index for the first month of the quarter (except for the years 1987, 1988 and 1989 where the index is only annual) deflated by the CPI-U for that month.

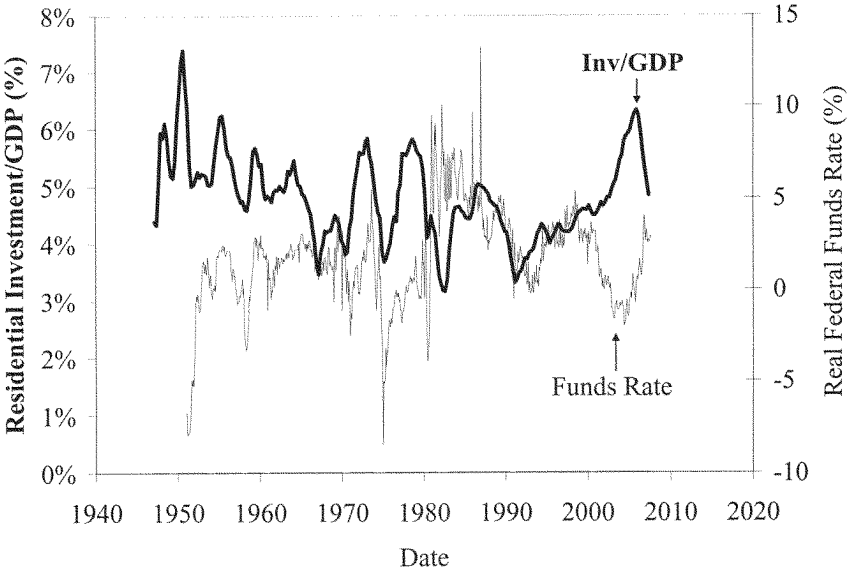


Figure 2: Residential Investment as Percent of GDP (quarterly, 1947–I to 2007–II) and Real Federal Funds Rate (monthly January 1947 to July 2007). Source: Robert J. Shiller: "Understanding Recent Trends in House Prices and Home Ownership," Federal Reserve Bank of Kansas City Jackson Hole Symposium, September 2007 [attachment to this testimony]. Residential Investment and GDP are nominal values from National Income and Product Accounts. Real federal funds rate, end of month, is computed by subtracting the rate of increase of CPI-U for the 12 months up to and including the month. Recessions as defined by the National Bureau of Economic Research are shown as the narrow areas between adjacent vertical lines.

UNDERSTANDING RECENT TRENDS IN HOUSE PRICES AND HOME OWNERSHIP[1,2]

This paper looks at a broad array of evidence concerning the recent boom in home prices, and considers what this means for future home prices and the economy. It does not appear possible to explain the boom in terms of fundamentals such as rents or construction costs. A psychological theory, that represents the boom as taking place because of a feedback mechanism or social epidemic that encourages a view of housing as an important investment opportunity, fits the evidence better. Three case studies of past booms are considered for comparison: the US housing boom of 1950, the US farmland boom of the 1970s, and the temporary interruption 2004–5 of the UK housing boom. The paper concludes that while it is possible that prices will continue to go up as is commonly expected, there is a high probability of steady and substantial real home price declines extending over years to come.

While home price booms have been known for centuries, the recent boom is unique in its pervasiveness. Dramatic home price booms since the late 1990s have been in evidence in Australia, Canada, China, France, India, Ireland, Italy, Korea, Russia, Spain, the United Kingdom, and the United States, among other countries.[3]

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[1] This paper was originally presented at "Housing, Housing Finance, and Monetary Policy," an economic symposium sponsored by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming, on August 31–September 1, 2007. The author is indebted to Tyler Ibbotson-Sindelar for research assistance, and, for suggestions and other help, to Harold Magnus Andreassen, Terry Loebs, William Smalley, and Ronit Walny.

[2] By Robert J. Shiller, Professor of Economics and Professor of Finance, Yale University, and Chief Economist, MacroMarkets LLC.

[3] According to OECD data, in 2006 nominal home price inflation exceeded 10 percent a year in 8 of 18 OECD member countries. Real price increases exceeded 10 percent a year in five of these countries. Japan was the only country to show a nominal or real price decline in 2006, and house prices there have been declining steadily since 1992. See *OECD Economic Outlook*, May 2007, Statistical Annex, Table 59, House Prices.

There appears to be no prior example of such dramatic booms occurring in so many places at the same time.

Within the United States, the current boom differs from prior booms in that it is much more of a national, rather than regional, event. In the current boom, successive rounds of regional home price booms have occurred that eventually became what can be called a national boom.

The boom showed its first beginnings in 1998 with real (inflation-corrected) home price increases first exceeding 10 percent in a year on the west coast, in the glamour cities San Diego, Los Angeles, San Francisco and Seattle. The incipient boom then attracted only moderate attention since it was confined to the west coast, and the cumulative price gain was still not dramatic. But the boom quickly spread east, with 10 percent 1-year real home price increases appearing in Denver and then Boston in 1999. These cities kept on appreciating at a high rate.

As years went by yet new cities started seeing substantial real home price increases. Even though it was a recession year, Miami, Minneapolis, New York, and Washington DC began to see 10 percent real price increases in 2001. Then there arrived the late entrants, who compensated for their delay with the intensity of their price boom. Las Vegas first saw a 10 percent annual real home price increase in 2003, and real home prices shot up 49 percent in 2004. Phoenix first saw a 10 percent real price increase in 2004 and then real home prices shot up 43 percent in 2005. And still, as of that date most of the other cities were still going up at substantial rates. The result of this succession of booms, in so many places has been a massive increase in national home prices over a period of nearly a decade. The boom was tempered somewhat by the fact that some cities never experienced booms. In Atlanta, Charlotte, Chicago, Cleveland, Dallas and Detroit there was no year since 1998 in which real home prices increased by 10 percent in a year, though even these cities showed some increases.

Figure 1 shows, with the heavy line, the S&P/Case-Shiller National Home Price Index for the United States, corrected for inflation using the Consumer Price Index. This shows the market situation at the national level. Nationally, real home prices rose 86 percent between the bottom in the fourth quarter of 1996 and the peak 9.25 years later in the first quarter of 2006.

This dramatic price increase is hard to explain, since economic fundamentals do not match up with the price increases. Also shown on the figure is an index of real owner occupied rent (thin line). Real rent has been extremely stable when compared with price. Real rent increased only 4 percent from the 1996–IV to 2006–I. The rent figures indicate that there has been virtually no change in the market for housing services, only in the capitalization of the value of these services into price.

The boom in real home prices since 1996–IV cannot be explained by rising real construction costs either, even though there appears to be a common idea, among the general public, that it might. Using data from Engineering News Record (2007), and correcting it for inflation with the CPI-U, one finds that while the real price of 1/2-inch gypsum wallboard rose 41 percent from the trough in real home prices in 1996–IV to the peak in real home prices in 2006–I, the real price of 5/8-inch plywood rose only 9 percent, and the real price of 2x4 common lumber actually *fell* 32 percent. Labor costs are the single most important component of building costs, and these showed little change as common-labor earnings have stagnated. The Engineering News Record Building Cost Index corrected for inflation showed relatively little change over this interval. In fact the index corrected for CPI inflation showed a slight decline from 1996–IV to 2006–I, as can be seen in Figure 1, dotted line.

Note that real owners' equivalent rent and real building costs track each other fairly well, as one might expect. But neither of them tracks real price at all, suggesting that some other factor—I will argue market psychology—plays an important role in determining home prices.

The boom may be coming to an end in the United States where a sharp turnaround in home prices can be seen in the bold line in Figure 1, with real home prices falling 3.4 percent since the peak in the first quarter of 2006. Anecdotal reports are also appearing within the last year of a softening of the boom or even outright falls in home prices in other countries as well, but the data already in do not yet show this, and, on the contrary, some countries still seem to be appreciating fast. The latest S&P/Case-Shiller Home Price Indices (for May 2007) even show a slight strengthening of the housing market in a number of cities.

When there are declines, they may be muted at first, and disguised by noise. Home sellers tend to hold out for high prices when prices are falling.[4] The 17 percent decline in the volume of US existing home sales since the peak in volume of sales in 2005 is evidence that this is happening now.

The market for homes is clearly not efficient, and shows enormous momentum from year to year, as Karl Case and I first demonstrated in 1988. We attributed this inefficiency to the high transactions costs associated with this market, which make exploitation of the inefficiency prohibitively expensive. In May 2006 the Chicago Mercantile Exchange, in collaboration with the firm I co-founded, MacroMarkets LLC, created futures and options markets for US single family homes that are cash-settled using the S&P/Case-Shiller home price indices. Some day these markets may have the effect of making home prices more efficient, but these markets still are not big enough to affect the cash market very much. Given the tendency for long trends in home prices, and given the downward momentum in price and high valuation relative to rent, the possibility of a substantial downtrend in home prices over many years into the future must be considered.

The implications of this boom and its possible reversal in coming years stands as a serious issue for economic policy makers. It may be hard to understand from past experience what to expect next, since the magnitude of the boom is unprecedented. The implications of the boom have produced difficult problems for rating agencies who must evaluate the impact of the boom on securities such as the collateralized debt obligations (CDOs) that have burgeoned in the U.S. from virtually nothing at the beginning of the housing boom to approximately $375 billion issued in 2006. The trickiest problem these agencies face in assessing these securities, many of which are backed by subprime mortgages, is correlation risk (the risk that many of the real-estate-backed assets will default at the same time) a risk that is directly connected to the risk of a macro real estate bust that may or may not follow the unprecedented boom.

In this paper, I will consider, from a broad perspective, the possible causes of this boom, with particular attention to speculative thinking among investors. I will argue that a significant factor in this boom was a widespread perception that houses are a great investment, and the boom psychology that helped spread such thinking. In arguing this, I will make some reliance on the emerging field of behavioral economics. This field has appeared in the last two decades as a reaction against the strong prejudice in the academic profession against those who interpret price behavior as having a psychological component. The profession had come to regard all markets as efficient, and to reject those who say otherwise. Now, however, behavioral economics is increasingly recognized, and has developed a substantial accumulation of literature that we can use to give new concreteness to ideas about psychology in economics.

FEEDBACK AND SPECULATIVE BUBBLES

The venerable notion of a speculative bubble can be described as a feedback mechanism operating through public observations of price increases and public expectations of future price increases. The feedback can also be described as a social epidemic, where certain public conceptions and ideas lead to emotional speculative interest in the markets and, therefore, to price increases; these, then, serve to reproduce those public conceptions and ideas in more people. This process repeats again and again, driving prices higher and higher, for a while. But the feedback cannot go on forever, and when prices stop increasing, the public interest in the investment may drop sharply: the bubble bursts.

This basic notion of the underpinnings of speculative bubbles can be traced back hundreds of years in the writings of commentators on speculative markets. The germ of the idea seems to go back to the time of the tulip mania in Holland in the 1630s (Shiller 2003). But academic economists have long been cool to the idea that such feedback drives speculative prices, and it has remained, until recently, largely in the province of popular journalists. Academic economists who wrote about them (Galbraith 1954, Kindleberger 1978) found that the academic profession, while in some dimensions interested in their work, largely distanced itself from their views. Part of the academic resistance has to do with unfortunate divisions in the profession: the notion of a speculative bubble is inherently sociological or social-psychological, and does not lend itself to study with the essential tool bag of economists.

[4] Genesove and Mayer (2001) have shown with data on individual purchases and sales that people who bought their homes at high prices are reluctant to sell at a lower price, apparently due to regret or loss aversion.

In my book *Irrational Exuberance* (2000, 2005), named after a famous remark of Alan Greenspan, I developed this popular notion of bubbles. I argued that various principles of psychology and sociology whose importance to economics has only recently become visible to most economists through the developing literature on behavioral economics help us to lend more concreteness to the feedback mechanism that creates speculative bubbles. These principles of psychology include psychological framing, representativeness heuristic, social learning, collective consciousness, attention anomalies, gambling anomalies such as myopic loss aversion, emotional contagion, and sensation seeking.

I argued that the feedback that creates bubbles has the primary effect of amplifying stories that justify the bubble; I called them "new era stories." The stories have to have a certain vividness to them if they are to be contagious and to get people excited about making risky investments. Contagion tends to work through word of mouth and through the news media. It may take a direct price-to-price form, as price increases generate further price increases.

News commentators on speculative phenomena clearly have the idea that contagion may be at work but tend to stay away from a really sociological view of speculative bubbles. They do not hear professional economists refer to such feedback often, so they are not confident of such a view. They tend to revert back to the comfortable notion that markets are efficient or that everything that happens in speculative markets ultimately comes from actions of the monetary authority. The social epidemic model, with its psychological and sociological underpinnings, is too poorly understood by economists in general to be represented as an authoritative view in media accounts.

I argued that a new era story that has been particularly amplified by the current housing boom is that the world is entering into a new era of capitalism, which is producing phenomenal economic growth, and at the same time producing both extreme winners and unfortunate losers. The phenomenal growth seen recently in China and India is part of the story, and the growing abundance of rich celebrities and extravagantly paid CEOs is another. The new era story warns people that they have to join the capitalist world and buy their homestead now, before it is priced out of reach by hordes of wealthy new investors. I also listed a number of other driving factors, partially or totally independent of this story that also helped drive the housing boom.

That the recent speculative boom has generated high expectations for future home price increases is indisputable. Karl Case and I first discovered the role of high expectations in producing the California home price boom in the late 1980s. We did a questionnaire survey in 1988 of home buyers in the boom city Los Angeles (as well as Boston and San Francisco) and compared the results with a control city, Milwaukee, where there had been no home price boom then.

The homebuyers were asked: "How much of a change do you expect there to be in the value of your home over the next 12 months?" For Los Angeles in 1988, the mean expected increase was 15.3 percent and the median expected increase was 11 percent. The mean was higher than the median in Los Angeles since about a third of the respondents there reported extravagant expectations, creating a long right tail in the distribution of answers. For Milwaukee in 1988 the mean expected increase was only 6.1 percent, and the median was only 5 percent. From this and other results from the survey we concluded that the 1980s boom in Los Angeles relative to Milwaukee appears to be driven by expectations.

Case and I are now, beginning in 2003, repeating the same survey annually in the same cities. In 2003, responding to the same question as above, the reported expectations in Los Angeles were almost as heady as they were in 1988: the mean expected increase was 9.4 percent, the median 10 percent. This time, however, the expectations of a good fraction of the people in Milwaukee had converged upwards toward those of Los Angeles: the mean expected increase was 8.6 percent. The median expected increase remained still low, at 5 percent. Given that the Milwaukee housing market had not boomed substantially as of 2003, one wonders why the expectations of a good fraction of its inhabitants matched those of people in Los Angeles. Expectations of home price increase are probably formed from national, rather than local evidence for many people, especially at a time of national media captivation with the real estate boom.

By 2006, as the housing market in Los Angeles was still going up but showed definite signs of weakening, the answers for the same question produced a mean expected price increase of only 6.1 percent and a median expected price increase of only 5 percent. In Milwaukee, the mean expected increase also cooled somewhat, to 6.8 percent, while the mean remained at 5 percent.

By 2007, after the housing market in Los Angeles dropped 3.3 percent (between May 2006 and May 2007, according to the S&P/Case-Shiller Home Price Index), the

answers for the same question (preliminary results) produced a mean expected 1-year price increase of -0.7 percent and a median expected 1-year price increase of 0 percent. In Milwaukee, the answers showed a mean expectation of 6.5 percent and a median of 3 percent.[5]

Thus, our expectations data show remarkable confirmation of an essential element of the bubble story: times and places with high home price increases show high expectations of future home price increases, and when the rate of price increases changes, so too do expectations of future price increases, in the same direction.

Many people seem to be accepting that the recent home price experience is at least in part the result of a social epidemic of optimism for real estate. But the idea that the single most important driver of the housing boom might be such a story, and not something more tangible like the policies of the central bank, has never really taken hold in public consciousness. People love to exchange stories of crazy investors or property flippers, but most just cannot seem to integrate such stories into a view of the movements of economies and markets. They do not accept that the market outcomes are the result of a world view, a Zeitgeist, that is encouraged by stories and theories whose contagion as ideas is amplified by the excitement surrounding the price increases.

We should still be careful not to overemphasize bubble stories in interpreting market movements. There are other factors that drive prices. Of course, monetary policy, which has the potential to affect the level of interest rates and hence the discount rate, is an important factor. But, even beyond monetary policy, it must be appreciated that there are many factors that drive decisions to purchase long-term assets such as housing. The decision to buy a house is a major life decision for most people, and is affected by all the factors that people consider when deciding on their life style and purpose. The decision is postponable, and so anything that attracts attention to or away from housing can have a significant effect on the state of new construction.

Housing seems not to have been a very speculative asset until the last few decades, except in a few places where there is a story that encourages people to think that housing may be especially scarce. The conventional view among economists until recently has been that housing prices are driven primarily by construction costs. For example, this view was neatly laid out in 1956 by Grebler, Blank and Winnick.

It is not surprising that people did not view housing as a speculative asset: almost all of the value of houses has been value of structure, which is a manufactured good. From this view, there would be no reason to think that one can make money by buying houses and holding them for resale than that one can make money by buying tables and chairs and holding them for resale. People apparently knew that home prices were dominated by structure prices. The recent real estate boom has changed this. According to a recent study by Davis and Heathcote, the percent of home value accounted for by land in the United States rose from 15 percent in 1930 to 47 percent in 2006.

Whether this higher fraction of value attributed to land is a stable new equilibrium or is a temporary phenomenon induced by a speculative bubble remains to be seen. Today, agricultural land sells for less than $2000 an acre, or about $300 per lot-sized parcel, a miniscule number compared to the cost of a structure. Of course, this is usually land in the wrong place, far from the urban areas and jobs and schools that people want to get on with their lives. But there is reason to expect that as existing urban land becomes very expensive relative to structures, there will be efforts to substitute away from that land, and so the fraction of value attributed to land in housing may be expected to mean-revert. Such substitution takes time.

New urban areas can be built elsewhere on land that is now cheap. Cities can economize on land by raising the population density and building high-rises. Already there is a movement advocating cities which, like Manhattan, or various urban areas in Europe and Asia, emphasize public transport, tall buildings bringing large numbers of people together. Such cities are highly attractive to many people because of the diversity of opportunity and entertainment there, and also simply be-

[5] Our survey also asks for 10-year expectations. These remain high in our 2007 (preliminary) results. In Los Angeles, the reported expectation for the average annual price increase over the next 10 years was 9.6 percent and the median was 5 percent. In all the cities we surveyed in 2007, only one respondent in 40 expects a decline over the next 10 years. Thus, there is little alarm about the state of the housing market for relevant investor horizons, and that perhaps explains why consumer confidence has not been harmed by the weakening housing market. It may also help explain why there is not panic selling, and suggests that home prices may yet recover.

cause of the feeling of excitement of crowds. Such cities make very economical use of land. Many more such cities can be built in the future, though, especially in the US, such new cities run against conventional notions of suburbia and automobile-based life.

Christopher Leinberger (2007) has shown that there is an increasing demand for "walkable urban centers," and finds that prices of living space in such centers goes at a premium. This premium reflects tastes for a city with lots of attractions nearby, within walking distance. This taste is not being rapidly fulfilled because of coordination problems and zoning restrictions. But, some developers have been able to crack this nut. He gives as an example Reston Town Center built on then-cheap land in the country that surrounds Washington DC. It was planned starting in 1961 by developer Robert E. Simon, whose initials form the first part of the town name. He launched a campaign to get the Fairfax County Board of Supervisors to pass an ordinance allowing high-density housing there. The Town Center was dedicated in 1990. It is now a cluster of high rises that mimics a city center. Values per square foot are comparable there to those of large city centers. This and other examples prove that the quality of life in downtown glamour cities is reproducible, if only zoning does not stand in the way.[6] It is plausible, then, that the economic pressure for more such spaces will eventually give way into the further development of such projects. The supply of houses will increase without substantial land shortage problem.

Concern about pollution, the environment and energy costs may also provide an impetus to move toward such cities. But the expectation that such new urban areas will be built is not a certainty yet, and will unfold if it does over many years.

Concern about economic inequality, which has been growing for decades now in most countries of the world, also has the potential to reduce barriers to the increase in the supply of housing and to bring prices down. For example, one of the first actions Gordon Brown took upon becoming Prime Minister was to offer a number of proposals to encourage the construction of millions of new homes to relieve people priced out of the housing market.

Gyourko, Mayer and Sinai have gotten great attention for a paper arguing that it may be reasonable to suppose that great cities will indefinitely outperform the economy in general. They found that some "superstar cities" have shown long-term, that is 50-year, appreciation above national averages. But, their study found only relatively small excess returns to homes in those cities. They use Census decadal owners' evaluations of the value of their homes. They report much smaller differences across cities than people expect. Their paper found that Los Angeles grew at 2.46 percent a year real 1950–2000, but this is far below the kind of expectations we have seen recently. According to our surveys, homebuyers in Los Angeles had a mean expectation for 10-year nominal price growth of 9.4 percent and a median of 10 percent in 2003. Moreover, in the decadal Census data there is no correction for quality change, and yet homes have been getting larger in the superstar cities, so the actual appreciation of existing homes was likely even less than 2.46 percent a year.

Considering the really long term, the centuries over which these cities persist, it is hardly reasonable to expect much more than a 1 percent a year advantage in those cities in the long term, for that would mean doubling every 69 years relative to other cities. If New York City were on the same price level as other cities at the time of the American Revolution, at a 2 percent per year relative advantage in appreciation a home there would now cost a hundred times as much as the same home in other cities—hardly plausible.

The Coldwell-Banker Home Price Comparison Index compares the price of a standard home across cities. They price "a single-family dwelling model with approximately 2,200 square feet, 4 bedrooms, 2½ baths, family room (or equivalent) and 2-car garage . . . typical for corporate middle-management transferees." They report that Beverly Hills, California, the home of movie stars, was the study's most expensive market in 2006, with the price of the standard home there at $1.8 million. The average price of their standard home, averaging over all cities in 2006, was $423,950. Thus, the home in Beverly Hills is only 4 times more expensive than the average home. If we can assume that Beverly Hills emerged into maximum movie-star status over the space of a hundred years, this amounts to only a little over 1 percent a year excess return. Thus, a 1 percent a year advantage is about the reasonable limit. For most investors in the recent boom environment, this is way under

[6] Glaeser and Gyourko (2002) present evidence that zoning restrictions are an important reason for high prices in urban areas. Comparing across major US metropolitan areas, they found no substantial correlation between housing density and housing prices, as one would expect to see if mere high demand for urban land drove home prices.

their expectations. Moreover, as Gyourko, Mayer and Sinai themselves pointed out, even the small advantage in appreciation that they claimed to find for the superstar cities has been offset by a lower rent-price ratio in those cities.

HOME OWNERSHIP AND CONSUMPTION OF HOUSING

Speculative booms in houses are unusual because purchasing a house is both an investment decision and a consumption decision. Moreover, the decision to purchase rather than rent is a decision not only to consume different kinds of housing services but also to lead a different kind of life; this difference has political ramifications, and so the purchase decision enters the arena of politics.

In the United States, the home price boom since the late 1990s was accompanied by a substantial increase in the home ownership rate (the percent of dwelling units owned by their occupants, as recorded by the U.S. Census). As can be seen from Figure 2, in the U.S. there were actually two time periods in the last century over which the home ownership rate increased, from 1940 to 1960, and again during the recent home price boom, since the mid 1990s. Between these two periods the home-ownership rate was fairly constant. The first period of increase, between 1940 and 1960, showed the more dramatic increase; this increase was substantially the result of new government policies to encourage home ownership after the surge of mortgage defaults during the Great Depression of the 1930s.

The increase since 1994 in home ownership appears to be due in large part to the remarkable housing boom. The boom psychology encouraged potential homeowners and encouraged lenders as well. Home buyers were encouraged by the potential investment returns. Mortgage lenders were encouraged since the boom reduces the default rate on lower-quality mortgages. The subprime mortgage market was virtually nonexistent before the mid 1990s, and rose to account for a fifth of all new mortgages by 2005. Denial rates for mortgage applications plunged after around 2000. The new loans went disproportionately to lower income borrowers, and to racial and ethnic minorities.[7]

The change appears to be the result of changes in public expectations for the real estate market, rather than changes in government policy. Unlike the 1940s–60s boom in homeownership, the current boom is not largely due to government initiatives to increase the homeownership rate. Instead, there has been a uniform background of government approval for homeownership over a long time period.

There has long been a popular view that homeownership is a thing to be encouraged, and as a result philanthropists and government officials have tried to do so.

The U.S. Civil War 1860–65 was blamed by contemporaries on a low level of home ownership in the South: "Ownership of real estate by its citizens is the real safeguard for the government. Where such a condition is almost universal, as in the Northern States, a revolution to destroy the government which guarantees that title is next to an impossibility. Had the system prevailed in the South, the people would not have been dragooned into rebellion . . ."[8]

The cooperative bank movement of the 19th and 20th centuries was motivated by a similar view. This movement was lauded in 1889 for its effects on poor people: "It has taken them out of the tenement houses and freed them from the baneful influences which are apt to exhale therefrom.[9]

There is some empirical support for the view. DiPasquale, Forslid and Glaeser (2000) have found that homeowners tend to be more involved in local government, are more informed about their political leaders and join more organizations than renters do, even after controlling for other factors. The evidence for this view has led to widespread political support for policies that encourage homeownership over much of the world.

On the other hand, contrary to expectations suggested by much of the literature on homeownership, homeownership rates across countries are not well explained in terms of any economic or demographic variables. Fisher and Jaffe (2002) could explain only 50 percent of the cross-country variability of homeownership rates. They found that in cross-country studies the homeownership rate is *negatively* correlated with GDP per capita.

There is, however, likely to be a limit on how far public policy should attempt to encourage homeownership. There are many sensible reasons for people to rent rather than own: people who cannot currently bear the responsibilities of household management, who are likely to move soon or who have other plans for their time,

[7] Gramlich, Edward M., *Subprime Mortgages*, 2007.

[8] "The Renovation of the South," Liberator, 35:32, p. 126, August 11, 1865.

[9] "Cooperative Banks in Massachusetts," The Bankers Magazine and Statistical Register, 43(8):610, February 1889.

should rent rather than own. Renting rather than owning encourages a better diversification of investments; many homeowners have very undiversified investment portfolios, and these investments are often highly leveraged. Moreover, creating too much attention to housing as investments may encourage speculative thinking, and therefore, excessive volatility in the market for homes. Encouraging people into risky investments in housing may have bad outcomes. It is possible that some countries have overreached themselves in encouraging homeownership (UN-Habitat 2002).

One might suppose that the increase in home ownership is associated with an increased share of consumption allocated to housing. However, as can also be seen from the figure, which shows housing as a percentage of personal consumption expenditures from 1929 to 2007, the share of consumption expenditures allocated to housing has stayed fairly constant at about 15 percent over the time interval, except for a temporary dip during World War II.[10] Housing expenditures include both the rent of tenant-occupied housing and the imputed rental value of owner-occupied housing. The U.S. Bureau of Economic Analysis computes the latter based on rents of similar tenant-occupied housing.[11] Thus, their calculations indicate that the amount of housing consumed has not increased as a fraction of total consumption; the increase in the homeownership rate reflects merely the switch from renting to owning of comparable-valued properties. Their numbers are not affected by the home price boom since the numbers are based on rents, not prices, of homes.

RESIDENTIAL INVESTMENT

Residential investment is a volatile component of GDP in the U.S. and it has had a highly significant relation to the business cycle. Residential investment represents essentially all economic activity directly related to housing structures. It is comprised of three main components: construction of new single family homes, construction of new housing units in multifamily structures, and "other structures," which includes improvements as well as brokerage commissions.

Figure 3, which was inspired by the work of Edward Leamer, as presented in his paper at the 2007 Jackson Hole conference, shows residential investment as a percent of GDP (quarterly 1947–I to 2007–II). We see that residential investment has gone through cycles that correspond closely to the ten recessions since 1950, as marked on the figure by business cycle dates computed by the NBER. Notably, residential investment as a percent of GDP has had a prominent peak before almost every recession since 1950, with a lead varying from months to years. There are only a couple of examples of such peaks that are not accompanied by recessions. Most striking from the figure is that ends of recessions were always marked by sharp upturns in residential investment, within months of the end of the recession. The latest recession (2001) shows the least drop in residential investment as compared with all prior recessions shown, suggesting that the relation between housing investment and the business cycle may be changing.

Figure 3 also shows the real federal funds rate (end of month, monthly) computed by subtracting the rate of increase of the CPI-U for the latest twelve months. Note that the relation of the real funds rate to recessions is rather more ambiguous than the relation of residential investment to recessions.

The extraordinary behavior of residential investment in recent years, especially since 2000, stands out. Residential investment rose to 6.3 percent of GDP in the last quarter of 2005, the highest level since 1950. We will consider the year 1950 as a case study below. But, we can note at first here that the 1950 economy was of course very unusual, for it followed World War II, a period when residential construction had been sharply curtailed for the war effort. After the war, there was a phenomenal baby boom, which translated into a sharply increased demand for housing after the war had decreased the supply. No fundamental shock approaching the magnitude of the World War II shock appears to have been at work in the post-2000 residential investment boom.

The right-most part of the figure can be used to illustrate a popular story for the latest home price boom, a story that it was all caused by the Fed. The real funds rate was cut sharply after 2000, and the housing boom (as measured by investment) took off. Then, in 2003, the Fed started raising real interest rates, and, following that, with a lag of a couple years, residential investment fell sharply. This story,

[10] Corresponding to this, the PCE deflator gave the price of housing shelter a weight of 15.0 percent in December 2004. The consumer price index, in contrast, gave housing shelter a weight of 32.7 percent in that month. See Brian C. Moyer, "Comparing Price Measures—The CPI and the PCE Price Index, National Association for Business Economics, 2006, http://www.bea.gov/papers/pdf/Moyer__NABE.pdf.

[11] Mayerhauser and Reinsdorf 2006.

which one repeatedly hears casually suggested, puts the full blame for the housing boom and bust on the Fed. The accuracy of this story in corresponding to the data since 2000 can be visualized in the chart by noting the almost mirror-opposite of the two series since 2000.

But, the story is clearly an oversimplification at best as a model, because the same relation between residential investment and the funds rate had never been seen before in the entire period since 1950. In fact, before 2000, one sees rather more a positive, not negative relation between the real funds rate and residential investment as a percent of GDP. From the figure, it appears that just as good a story for a number of recessions would be that the Fed cut rates in response to weakening housing investment prior to the recession than that it caused the declines in housing investment by raising rates.[12]

BROAD HISTORICAL COMPARISONS

There have been many real estate booms in history and real estate cycles that may be variously described as speculative booms or mere construction booms without any speculative enthusiasm.

Figure 4 shows the unusualness of the boom in a broad historical perspective using three series of home prices, series for the Netherlands, Norway and the United States, countries for which long historical price indices are available that make some attempt to control for changing size and quality of homes. The Dutch series was created by Piet Eichholtz at Maastricht University, and applies to Amsterdam only. The Norwegian series, created by Øyvind Eitrheim and Solveig Erlandsen, covers Bergen, Oslo and Kristiansand, and, from 1897, Trondheim, through 2003. The series was updated to 2006 and deflated by Harald Magnus Andreassen of First Securities in Norway. In all three countries the same general observations emerge: there has been an enormous home price boom since the 1990s, which dwarfs anything seen before.

CASE STUDIES OF BOOMS

Let us pursue here three case studies that illustrate the dynamics of real estate booms, with special attention to the psychology of the activity. We will consider here the 1950 home construction boom, which stands out in the figure above, the 1970s U.S. farmland boom, and the sudden reversal in the market for homes in the United Kingdom in 2005, when a speculative market that was generally recognized as finished and in decline suddenly reversed and began booming again.

The 1950 U.S. Construction Boom

The only time when construction activity in the U.S. was higher as a percent of GDP than it was in 2005 was the year 1950, when residential investment rose to 7.3 percent of GDP. Construction activity was described at the time as at record levels in all major regions of the United States. Why? It is not enough to dismiss this as a boom to correct shortages induced by World War II, since 1950 was already five years after the end of the war. In 1947, two years after the war, construction as a percent of GDP was as low as 4.3 percent, well below the postwar average of 4.8 percent. Moreover, in the following year, 1951, residential investment as a percent of GDP fell to 5.0 percent, just a little above the historical average.

Throughout this time, around 1950, there was no boom in real home prices, as can be seen from Figure 4. Home prices were rather flat, after having increased a lot at very end of World War II. It appears also that there were not expectations, at least at the beginning of the year, for further home price increases. A *Washington Post* opinion survey of builders, realtors and bankers in the greater Washington DC area published January 22, 1950 found 126 persons who thought that prices would remain the same in 1950, 46 who expected a price rise, and 38 who expected a price decline. Expectations of increase were about matched by expectations of decrease, and, in fact, given inflation, people effectively were expecting a fall in real prices. This was no speculative bubble. So, why were home sales setting all time records?[13]

The press in 1950 offered a number of reasons for the boom. First there were the concrete reasons. The Housing Act of 1950 reduced interest rates on FHA-insured loans by 0.25 percent and raised the guarantee of VA loans from 50 percent to 70 percent. "Increased competition" from these government-subsidized loans was said

[12] In his remarks at the Jackson Hole Symposium (2007), John B. Taylor discussed a model of U.S. housing starts in terms of just the federal funds rate, involving lags, estimated with quarterly data 1959 to 2007. He concluded that the model "tracks historical data on housing starts very closely" for the period 2000 to 2007, though he did not present an analysis of the model's success in the period before 2000.

[13] "Prices on 1950 Homes to Level, Survey Shows," *Washington Post*, Jan 22, 1950, p. R3.

to have led private lenders to improve their terms: offering 30-year mortgages where once they had offered only 20-year, and offering no-down-payment loans, controversial new products that were seen as necessary to stay competitive.[14]

This stimulus to housing demand appeared to come from Congress and mortgage lenders, not monetary policy. Fed policy at the beginning of 1950 was described as "neutral" with fears of rekindling inflation offset by evidence of weakness in the business situation and slumping commodity prices.[15]

But, beyond these concrete factors, the newspaper accounts refer to other psychological factors that are suggestive of the kind of things that affect general public thinking, and are hard for most of us to remember later. First of all, even though expectations of price increases did not seem to be a factor, there was repeated mention of people giving up waiting for price declines in housing (after the immediate postwar inflation) and a spreading feeling that "used house prices are not going down much more."[16]

The flight to suburbia was underway, and this flight was associated with a new American life style and a new sense of community: "nobody worries about keeping up with the Joneses and everybody becomes a good neighbor."[17] To the extent that the 1950 construction boom was associated with a change of consumer tastes toward suburban living away from center city living, there would be no reason to expect the surge in demand to boost existing home prices over all.

The beginnings of the war in Korea, with North Korea's surprise invasion of South Korea on June 25, and the first clash between North Korea and the US on July 5, led many to war fears, even fears of a "third world war." The possibility seemed very real that government restrictions on prices and construction might be in place again. Indeed, President Truman warned of possible rationing and price ceilings in July and asked for limited powers to control production and credit. Congressional debate began to consider price ceilings on real estate transactions. By December, with CPI inflation rapidly building, price and production controls were seen as "inevitable" and the beginnings of price controls were put in place.[18] It is hard to know exactly what people expected, but we do know that in 1950, according to a number of contemporary observers, buyers were "now resigned to the fact that if they are ever going to have a home, they hadn't better wait any longer."[19]

The new war against communists, coupled with the 1949 Soviet atomic bomb and the possible involvement of the Soviet Union in the war, led to an atomic bomb scare. Columnist Drew Pearson wrote:

> However, in this year 1950, half way through this modern and amazing century, we are in real danger of bogging down in an 'age of fear.' Faced with the awful knowledge that others have the atomic bomb, faced with fear of the hydrogen bomb, of bacteriological warfare, of new trans-oceanic submarines and transatlantic rockets, we are in definite danger of relapsing into an age of fear, an age when we do not go forward because we are paralyzed with fright.[20]

The fear led to concerted plans for civil defense, the construction of bomb shelters, and much talk about where the bombs might hit. It also led to a boom of new construction in the suburbs and countryside which allowed people to escape the risk of a possible nuclear attack on the center city, a powerful force that reshaped the country away from center cities.[21] One contemporary observer wrote of the suburban developers: "They're cashing in on the steady trek of city families to the suburbs, a trend that may be getting a little extra push from the war scare and atom bomb developments."[22]

It is difficult to capture all the thinking that goes into people's decision to buy a home this year rather than another year. One gets a sense that those who were writing in 1950 were having as much difficulty in understanding mass thinking about real estate as we have today. One realtor who was interviewed in 1950 said

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[14] "Easier Money for Homes," *Wall Street Journal*, June 2, 1950, p. 2.

[15] "Uncertainty Felt by Money Market," *New York Times*, January 3, 1950, p. 52.

[16] "Rising Costs, Easy Financing, Spur Home Sales," *Washington Post*, July 16, 1950, p. R4.

[17] "Life in the New Suburbia," *New York Times*, Jan 15, 1950, p. SM9.

[18] "Wage, Price Controls Seen by Top Aides: Snyder, Valentine Feel Time is Nearing for Application," *Washington Post*, December 5, 1950, p. 1.

[19] "Rising Costs, Easy Financing, Spur Home Sales," *Washington Post*, July 16, 1950, p. R4.

[20] "Dangers Noted in 'Age of Fear,' Drew Pearson," *The Washington Post*, June 26, 1950, p. B 11.

[21] "Country Homes: War in Korea Boosts City Dwellers' Demand for Rural Residences," *Wall Street Journal*, August 23, 1950, p. 1.

[22] "Suburban shopping: More Centers Going Up on the Outskirts, Lure Trade from Downtown," *Wall Street Journal*, August 15, 1950, p. 1.

simply "I also believe there is a psychological factor in home buying which is now expressing itself in a mass desire to buy homes."[23]

This psychological factor in 1950 may bear some resemblance to the psychological factors at work in the early 2000s, even though in 1950 there was no classic speculative boom, and there apparently was little enthusiasm for housing as "the best investment." There are still similarities with 1950, in a sense that home prices are not going down, that one may have to buy now or miss out on an opportunity to buy at all, and a war and a general feeling of anxiety about personal safety.

The 1970s Boom in U.S. Farmland Prices

Farmland prices went through an extraordinary boom in the 1970s. Figure 5 shows real US farmland prices since 1900. Two big events stand out in this century-plus of data: a boom in the 1970s, a bust in the 1980s, and a renewed boom in the 2000s.

The farmland boom of the 1970s was sometimes attributed at the time to rising food prices. In fact, the farm products component of the US Producer Price Index rose a total of 9 percent relative to the Consumer Price Index from 1970 to 1980, and then leveled off. These movements are not big enough to justify the farmland boom and bust.

More important than the food prices may be the "great population scare" of the 1970s. In 1972, a Club of Rome study *Limits on Growth*, authored by Donella H. Meadows and her colleagues at MIT predicted that expanding population growth would soon lead to exhaustion of resources, and a prominent scenario in their analysis was mass starvation around the world. The book received extraordinary attention, even though it was criticized by the economics establishment as alarmist and without substantial evidence. The effects of this scare were felt all over the world. For example, China instituted her one-child policy in 1979.

Changes in the behavior of institutions were part of the boom phenomenon. Tax institutions changed in the direction of support for the boom. US federal tax law was changed in 1976 to allow farm estates left to a member of the immediate family to be valued at a capitalization of rents, rather than the high market prices, for computation of estate taxes, and to be paid over 15 years. Thus, it appears that the boom stimulated Congress to place farmland in a special privileged category for capital-gains tax purposes.

In the high-inflation years of the late 1970s, a theory began to take hold among institutional investors that farmland is a good inflation hedge. In 1980, the *New York Times* wrote:

> Investment funds, traditionally leery of investment in farmland, are starting to flow more rapidly into agriculture. Several major insurance companies have stepped up their purchase of farmland in the past two years and a number of other institutions "are beginning to express greater interest in farmland," according to Irving S. Wolfson, executive vice president of the Phoenix Mutual Life Insurance Company of Hartford.[24]

Meanwhile, investment funds specializing in farmland investments were set up, such as the American Agricultural Investment Management Co and Oppenheimer Industries.

Newspaper accounts of the time described the 1970s as due in part to speculative foreign investors:

> Although much of the foreign money is hard to trace, European Investment Research Center, a private consulting firm based in Brussels, estimates that foreigners invested some $800 million in farmland last year. That would come to a startling 30 percent of all foreign direct investment in the U.S., according to the Commerce Dept. "What we are witnessing," says Kenneth R. Krause, a senior economist for the Agriculture Dept., "is the biggest, continuing wave of investment in American farmland since the turn of the century." . . . Amrex Inc., a San Francisco-based real estate firm, is holding a meeting in Zurich next week to introduce buyers to sellers who represent as much as $750 million worth of U.S. farmland. Some observers warn that the industry is attracting its share of hucksterism as well. West German newspapers are being flooded with real estate advertisements, apparently from small U.S. brokers, that often offer only an anonymous post office box number for an address.[25]

The boom period coincided with a common theme in newspapers of the time that there was concern that farmland was rapidly shrinking as it was converted to

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[23] "Prices on 1950 Homes to Level, Survey Shows," *Washington Post*, Jan 22, 1950, p. R3.
[24] Ann Crittenden, "Farmland Lures Investors," *New York Times*, November 24, 1980 p. D 1.
[25] "Foreign investors flock to U.S. farmlands," *Business Week*, March 27, 1978, p. 79.

homes, shopping centers and parking lots, thereafter likely never to return to cultivation. It seemed like a brand new idea: who had ever thought that a farm, once converted, would *never again* revert back to farmland? Eventually, a 1980 federal study "National Agricultural Lands Study" sounded this alarm. In describing this study, US Agriculture Secretary Bob Bergland noted then that the idea that farmland was being consumed was a new one: "This question never has been seriously addressed because, for as long as I can remember, all of us thought we had land to spare."[26]

This boom even had a hit song associated with it, Joni Mitchell's "Big Yellow Taxi," which had the refrain:

They paved paradise
And put up a parking lot
With a pink hotel, a boutique
And a swinging hot spot.
Don't it always seem to go
That you don't know what you've got
Till it's gone
They paved paradise
And put up a parking lot.

Joni Mitchell's song *Big Yellow Taxi* had an unusual appeal to thinking people, and had a very long life, issued in 1970, it reached a peak of #24 on the Billboard chart in 1975, just before the most rapid price increases of the farm price boom. (Curiously, the same song was recorded by the Counting Crows in 2003, near the peak of the recent farmland boom, and reached 42 on the Billboard chart.)

The end of the boom coincides with President Carter's Soviet grain embargo, which lowered the price of grains that farms produced, as well as the sharp rise in interest rates during Volcker's term, and the recessions of 1980 and 1981–2.

After the correction following 1980, the 1970s explosion of farm prices was described as a dramatic bubble. One account, in 1983, wrote that values "overexpanded in the belief that inflationary runups in land prices would never end."[27] It does appear that it was a bubble, and spurred by stories and lore that emphasized the emerging scarcity of farmland. It was perhaps a more rational one than the housing bubble we appear to be in recently, for at least farm land is not reproducible, as housing structures are.

The Turnaround in London Home Prices in 2005

Figure 6 shows an index of real greater-London existing house prices, for a case study that concerns the downturn in real prices from the second quarter of 2004 to the second quarter of 2005. That downturn is not the most striking feature of the figure. It is much more striking that real home prices more than doubled from 1983 to 1988 and then fell 47 percent, came almost all the way back down, by 1996, producing an almost-perfect inverted-V pattern in home prices over a period of thirteen years. Also very striking is the boom in home prices from 1996 to the present, which shows real home prices nearly tripling. But here, we are focusing instead on the much smaller 6 percent downturn in real home prices over the year from 2004–II to 2005–II. This downturn was quickly reversed: real home prices resumed heading up at a rate of 9 percent a year from 2005–II to 2007–I, not so much smaller than the 12 percent a year real price increase from 1996 to 2004.

This small downturn is interesting now because it looks very much like the downturn that we have seen in U.S. prices in the last year. If one places a piece of paper over the figure positioned so as to block out all data after the second quarter of 2005, one will see a price path that closely resembles that seen in figure 1 for the US above. The decline in London home prices was interpreted by many as the end of the home price boom, but the downdraft was suddenly and decisively reversed. It is very common to hear forecasts that the U.S. home market is near a bottom now, and will resume its upward climb soon. These are forecasts for a repeat of the London experience after 2005.

The Bank of England had begun tightening rates in November 2003 when the base rate was 3.5 percent and completed the tightening in August 2004, when the base rate reached 4.75 percent. The decline in home prices began about 6 months before they stopped tightening. But it is hard to see why this modest tightening should have been responsible for the decline in home prices. Similar interest rate increases in 1997 and 1999 had not stopped the housing boom, and interest rates

[26] "Shortage of U.S. Farmland Predicted; Land Shortage, Higher Cost of Food Foreseen," *Washington Post*, January 17, 1981, p. B1.
[27] "Debt Still Plagues Farmers," *Business Week*, March 21, 1983, p. 109.

were still lower in 2005 than at the ends of these prior tightening cycles. Despite the tightening, 2016 index-linked gilt yields fell over the same interval, from 1.93 percent to 1.79 percent, which, if anything, would suggest that home prices should rise, not fall. After home prices bottomed, index-linked gilt yields continued essentially the same downward trend until September 2006, and then began to rise. Thus, it is hard to see an explanation for the price behavior at this time in terms of interest rate changes.

The 2004–5 downturn in UK home prices was the subject of thousands of newspaper articles at the time. Some of these articles spoke of the "end of the housing boom" or "the last desperate gasp of a defunct housing boom" as if this end were self-evident. Even those that were relatively optimistic did not predict the strong recovery that actually transpired. One reporter wrote that "even optimists forecast prices will rise by no more than 2 per cent annually in the next few years—and pessimists expect an outright fall."[28]

An important theme in these articles was comparison with other countries. In an article in *The Independent* entitled "Property Market Cools in Britain, But in US It's the Latest Gold Rush" it was noted that "Just as in Britain, dinner party conversations that used to be about schools or sports now have one constant topic: property prices, and the outrageous price the neighbours got for their house across the street."[29] Continuing housing booms in France, Ireland and Spain (where the boom was still strong) and the Netherlands (where a boom had converted into a soft landing of slower price increases) were also noted. Since the Bank of England had raised rates, while other central banks had not, blame for the weakening housing market was often attributed to the temporary effects of these rate increases, rather than to any change in market psychology, thereby discouraging any sudden change in expectations about long-run home price increases.[30]

There is a sort of coordination problem with psychological expectations in a time of a boom. If people infer their expectations from recent price changes not just at home but in other places, then it may be hard for sharply changed expectations ever to take root. People believe that a change in market psychology drives the housing market, and if they look both near and far to gauge the psychology of others, then it will be hard to see a change.

Moreover, the kind of expectation for home prices that is implicit in the common 21st century world view, that increasing home prices are the result of our capitalist institutions and the phenomenal economic growth that the adoption and perfection of these institutions around the world has brought about, is not likely to be changed suddenly by the appearance of short-run price declines.

It is hard to find in any account in the news media any objective reason for the resurgence of the boom after the second quarter of 2005. The Bank of England did not substantially cut the base rate: there was only a small 25 basis point cut in August of 2005, and in fact the rate was then increased, by over a percentage point by May of 2007. The tiny and relatively brief rate cut could hardly be held responsible for the massive turnaround in the housing market.

The return of the boom came as a complete surprise. An October 2005 article said: "Between January and April sales were about 25 percent below average. It's quite staggering how things have turned around in the last couple of months. We are now back to average levels, and are seeing more transactions than at this time last year." The best this article could come up with as an explanation was "house prices have not fallen as much as some analysts were warning. This has given buyers the confidence to re-enter the market as the fear of losing money on a property purchase is eroding."[31] From a behavioral economics perspective, that explanation is not silly, as it is part of a broader story of speculative feedback.

This London case study should caution any who feel that a substantial decline in home prices in the US is inevitable, given the recent declines, but not really offer much comfort for real estate optimists either, given the isolation, and special character, of the brief London downturn.

CONCLUSION

The view developed here of the boom in home prices since the late 1990s has it operating as a classic speculative bubble, driven largely by extravagant expectations

[28] "Buyers Beware: Britain's Buy-to-Let Boom May Turn Out to Be a Bust," *Financial Times*, May 30, 2005, p. 14.

[29] *The Independent*, June 1, 2005, p. 56.

[30] Jane Padgham, "Britain Slips Down House Price League as Rate Rises Kick In," *The Evening Standard* (London) January 28, 2005, p. 45.

[31] "Doomsters May Be Wrong," *Sunday Times* (London), October 23, 2005, p. 5.

for future price increases. As such, the situation may well result in substantial declines in real home prices eventually.

The case studies above suggest that there are a wide variety of considerations and emotions that impact on a decision whether or not to buy a house. If there are fears of war or terrorism (as we saw in the case of the 1950 boom) or fears of environmental destruction (as we saw in the case of the farmland boom of the 1970s) then there may be major changes in home prices or construction activity even if there is no change in the traditional list of fundamentals.

Institutional changes tend to come in connection to the speculative psychology, not just as exogenous advances in financial or bureaucratic technology. Thus, we saw the lengthening of mortgage maturities during the real estate boom of 1950, the development of real estate investing institutions and changes in the tax law during the farmland boom of the 1970s. From these examples, it should be no surprise that we have seen the proliferation of new mortgage credit institutions, the deterioration of lending standards, the growth of subprime loans, and the rapid expansion of the CDO market, in the real estate boom of the 2000s.

Monetary policy does not come out as central in the case studies examined here. Monetary policy is in an important sense concentrated on the extreme short-term. The fundamental target variable in the U.S. is the federal funds rate, an overnight rate. And yet, economic decision makers are focused on a lifetime decision problem. Economic decision makers have to decide on the long-term, 50-year-plus, value of their investments. The difference of maturities is a factor on the order of 10,000 to one. Using monetary policy to manage such decisions is a little bit like adding a grain of sand a day to a scale that is weighing a car.

People's opinions about long-term decisions, notably how much housing to buy and what is a reasonable price to pay, change in the short term only because their opinions about the long-term change. But, these opinions about the long-term are hard to quantify because they are usually not expressed. They are usually expressed only in story form, in attention given to homespun theories, and the like.

People base life decisions upon vague expectations for the future, and if they have the false impression that they have a unique property that is going to become extremely valuable in the future, then they may consume more, driving the economy, and they may drive up prices today. That is what we have seen happening over much of the last decade.

The psychological expectations coordination problem appears to be a major factor in explaining the extreme momentum of home price increases. Investors who think that home prices will continue to go up because they perceive prices as going up generally around the world may not change this expectation easily since they will have trouble coordinating on a time to make the change. A housing supply response to high prices will tend to bring prices down, but the increment to housing supply in any one year is necessarily tiny given the nature of construction technology, and that supply can be absorbed easily if expectations are still strengthening. If, however, price declines continue in the United States, there could be a more coordinated response to enforce declining expectations around the world. If the United States shows substantial price declines, then the underlying popular story of the boom, related to the perception of a triumph of capitalism and the explosive growth of the world's economies, may become old. The United States, the premier example of a capitalist economy, has the potential to lead price expectations downward in many countries.

The example, considered above, of the recovery from decline in London in 2005 serves as a good reminder that speculative markets are inherently unpredictable, and that the incipient downturn in the United States could reverse and head back up. No one seems to have a good understanding what causes these reversals. Still, the examples we have of past cycles indicate that major declines in real home prices—even 50 percent declines in some places—are entirely possible going forward from today or from the not too distant future. Such price declines have happened before. In the last cycle in the United States, as shown in figure one, real home prices fell only 15 percent from the peak in the third quarter of 1989 to the fourth quarter of 1996, but some cities' real prices fell much more. Los Angeles real home prices fell 42 percent from the peak in December 1989 to the trough in March 1997. We saw from Figure 6 that real home prices in London fell 47 percent from the third quarter of 1988 to the fourth quarter of 1995.

The boom cycle that followed these declines, after the late 1990s, was even bigger than that preceded them, and so it is not improbable that we will see such large real price declines extending over many years in major cities that have seen large increases. Since the number of cities involved in the recent boom is so much higher than in the last boom, we could see much more than the 15 percent real drop in real national home price indices that we saw last time.

References

Brown, Lynn E., "National and Regional Housing Patterns: History of Residential Investment in the U.S." *New England Economic Review*, July/August, 2000.

Case, Karl E., and Robert J. Shiller, "The Efficiency of the Market for Single Family Homes," *American Economic Review*, 79:1, 125–37, March, 1989.

Case, Karl E., and Robert J. Shiller, "Home Buyer Survey Results 1988–2006," unpublished paper, Yale University, 2006.

Davis, Morris A., and Jonathan Heathcote, "The Price and Quantity of Residential Land in the United States," unpublished paper, University of Wisconsin, Madison WI, 2006.

DePasquale, Denise, Rikard Forslid, and Edward L. Glaeser, "Incentives and Social Capital: Are Homeowners Better Citizens?" *Journal of International Economics*, 50(2):497–517, 2000.

Eichholtz, Piet, "A Long Run House Price Index: The Herengracht Index, 1628–1973, Real Estate Economics, 25:175–92, 1997.

Eitrheim, Øyvind, and Solveig Erlandsen, "House Price Indices for Norway, 1819–2003, in Øyvind, Eitrheim, Jan T. Klovland and F. Qvigstad, editors, *Historical Monetary Statistics for Norway*, pp. 341–375.

Engineering News Record, *Second Quarterly Cost Report*, McGraw Hill Construction 2007.

Fisher, Lynn M. and Austin J. Jafee, "Determinants of International Home Ownership Rates," unpublished paper, Smeal College of Business Administration, Pennsylvania State University, 2002.

Galbraith, John Kenneth, *The Great Crash 1929*, Boston: Houghton Mifflin, 1954.

Genesove, David, and Christopher Mayer, "Loss Aversion and Seller Behavior: Evidence from the Housing Market," Cambridge MA: National Bureau of Economic Research Working Paper No. 8143, 2001.

Glaeser, Edward L., and Joseph Gyourko, "The Impact of Zoning on Housing Affordability," NBER Working Paper #8835, March 2002.

Gramlich, Edward M., *Subprime Mortgages: America's Latest Boom and Bust*, Washington D.C.: The Urban Institute Press, 2007.

Grebler, Leo, David M. Blank, and Louis Winnick, *Capital Formation in Residential Real Estate*, Princeton NJ: National Bureau of Economic Research and Princeton University Press, 1956.

Gyourko, Joseph, Christopher Mayer, and Todd Sinai, "Superstar Cities," Cambridge MA: National Bureau of Economic Research Working Paper No. 12355, July 2006.

Kindleberger, Charles Poor, *Manias, Panics and Crashes: A History of Financial Crises*, New York: Basic Books, 1978.

Leamer, Edward E., "Housing and the Business Cycle," paper presented at the Federal Reserve Bank of Kansas City Symposium "Housing, Housing Finance, and Monetary Policy," Jackson Hole, Wyoming, August 31, 2007.

Leinberger, Christopher B., "Financing Walkable Urbane Projects," *Urban Land*, January 2007.

Mayerhauser, Nicole, and Marshall Reinsdorf, "Housing Services in the National Economic Accounts," U.S. Bureau of Economic Analysis, August, 2006.

Meadows, Donella H., Dennis L. Meadows, Jorgen Randers, and William W. Behrens III, *Limits on Growth: a report for the Club of Rome's project on the predicament of mankind*, New York: Universe Books, 1972.

Poole, Robert, Frank Ptacek, and Randal Verbrugge, "Treatment of Owner-Occupied Housing in the CPI," Office of Prices and Living Conditions, Washington DC: Bureau of Labor Statistics, 2005.

Shiller, Robert J., "From Efficient Markets to Behavioral Finance," *Journal of Economic Perspectives*, 17(1):83–104, 2003.

Shiller, Robert J., *Irrational Exuberance*, 2nd Edition, Princeton: Princeton University Press, 2005.

Shiller, Robert J., "Low Real Interest Rates and High Asset Prices," unpublished paper, for presentation at Brookings Panel on Economic Activity, Washington DC, September 2007.

Taylor, John B., "Housing and Monetary Policy," remarks presented at the Federal Reserve Bank of Kansas City Symposium "Housing, Housing Finance, and Monetary Policy," Jackson Hole, Wyoming, August 31, 2007.

UN-Habitat, *Rental Housing: An Essential Option for the Urban Poor in Development Countries*, 2002, http://www.unhabitat.org/downloads/docs/3588_62479_655.pdf.

Van den Noord, Paul, "Are Housing Prices Nearing a Peak? A Probit Analysis for 17 OECD Countries," OECD Economics Working Paper No. 488, June 2006.

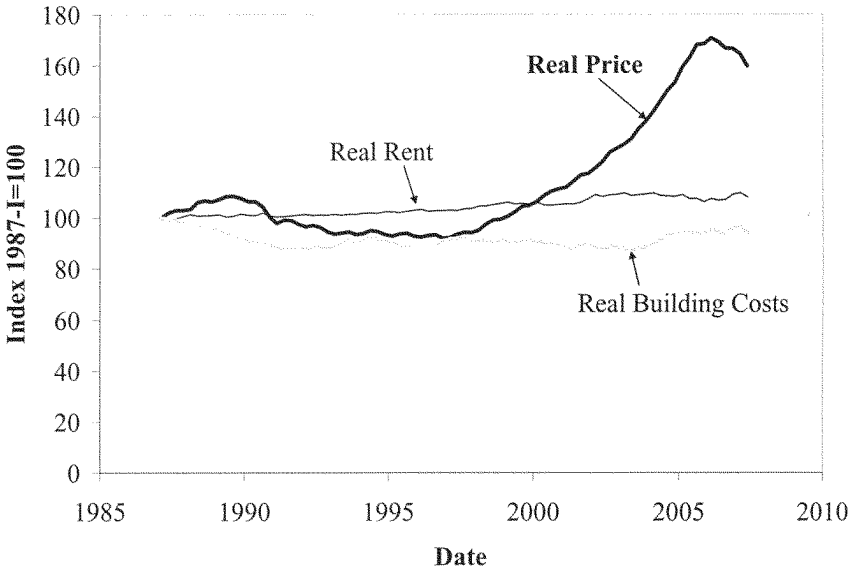

Figure 1: Real US Home Prices, Real Owners Equivalent Rent, and Real Building Costs, quarterly 1987–I to 2007–II. Source: authors calculations. Real US Home Price is the S&P/Case-Shiller U.S. National Home Price Index deflated by the Consumer Price Index (CPI-U) for the first month of the quarter resealed to 1987–I=100. Real Owners Equivalent Rent is the U.S. Bureau of Labor Statistics Owners Equivalent Rent December 1982=100 from the CPI-U divided by the CPI-U, all items, 1982–4=100, both for the first month of the quarter, resealed to 1987–1=100. Real building cost is the McGraw-Hill Construction/Engineering News Record Building Cost Index for the first month of the quarter (except for the years 1987, 1988 and 1989 where the index is only annual) deflated by the CPI-U for that month.

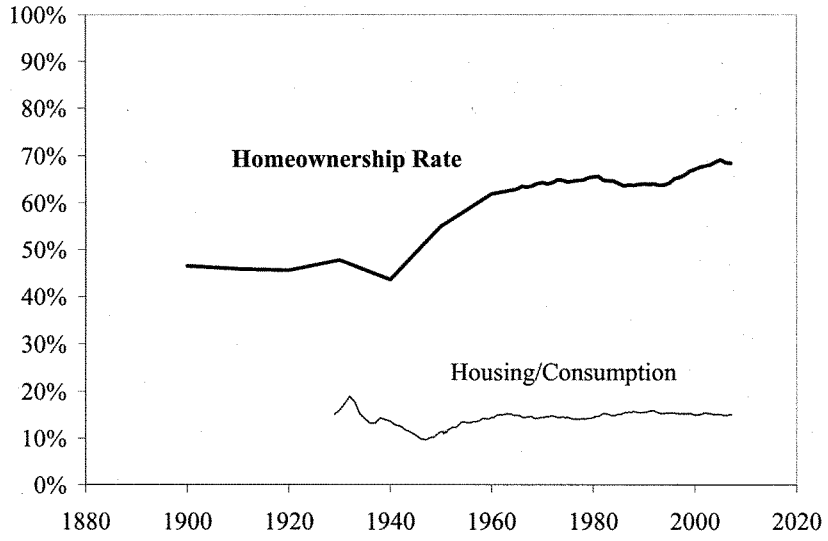

Figure 2: Home Ownership and Housing as a Share of Consumption. Source: The home ownership rate, percentage of homes that are occupied by their owner (decadal

1900 to 1960, annual 1965 to 2007) is from the U.S. Census. Housing/Consumption (annual 1929 to 1946, quarterly 1947–I to 2007–I) is calculated by the author as the ratio of housing expenditures to personal consumption expenditures, National Income and Product Accounts, Table 2.3.5.

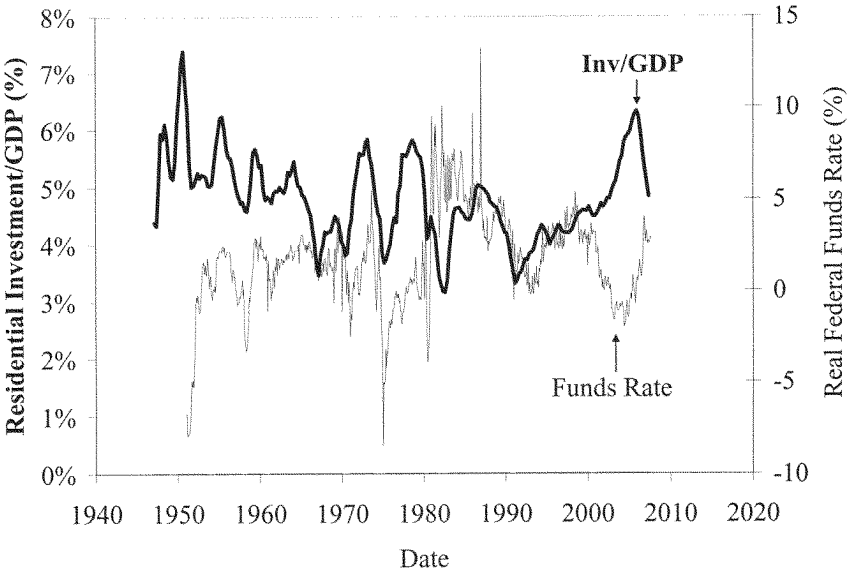

Figure 3: Residential Investment as Percent of GDP (quarterly, 1947–I to 2007–II) and Real Federal Funds Rate (monthly January 1947 to July 2007). Source: author's calculations. Residential Investment and GDP are nominal values from National Income and Product Accounts. Real federal funds rate, end of month, is computed by subtracting the rate of increase of CPI-U for the 12 months up to and including the month. Business cycle dates from the National Bureau of Economic Research are shown by vertical lines.

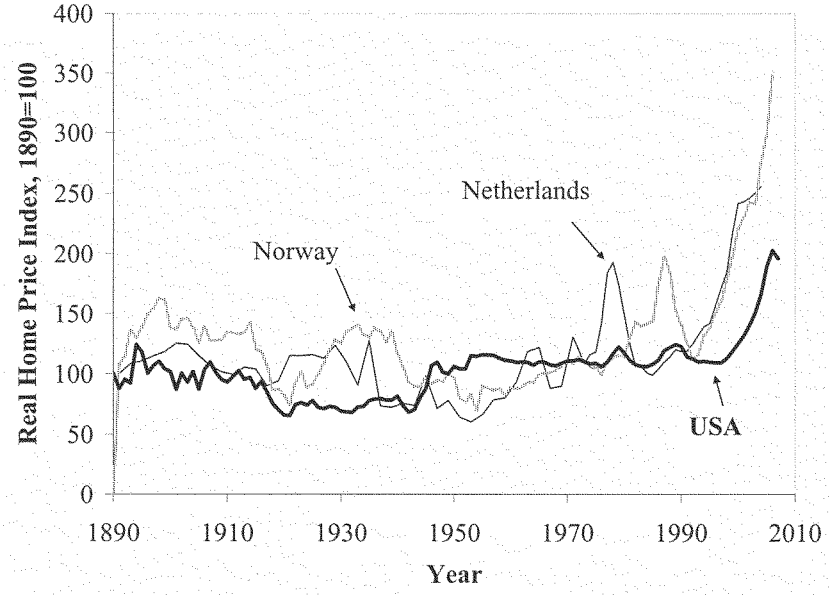

Figure 4: Home price indices deflated for consumer prices and rescaled to 1890=100, Netherlands, Norway and USA. The Netherlands index (semi-annual 1890–1973 then annual 1974–2004) is produced by Piet Eichholtz of Maastricht University; it is for the Herengracht region of Amsterdam 1900–1973, which he updated to 2004 using other data for the city of Amsterdam. The Norway index (annual) is a Norges Bank series (Eitrheim and Erlandsen, http://www.norges-bank.no/Pages/Article_42332.aspx) 1890–2003 updated to 2006 and deflated by Harold Magnus Andreassen of First Securities ASA, Oslo. The USA index (annual 1890–2007) is from Robert Shiller, *Irrational Exuberance*, Princeton, 2005, updated using the S&P/Case-Shiller National Home Price Index for the United States.

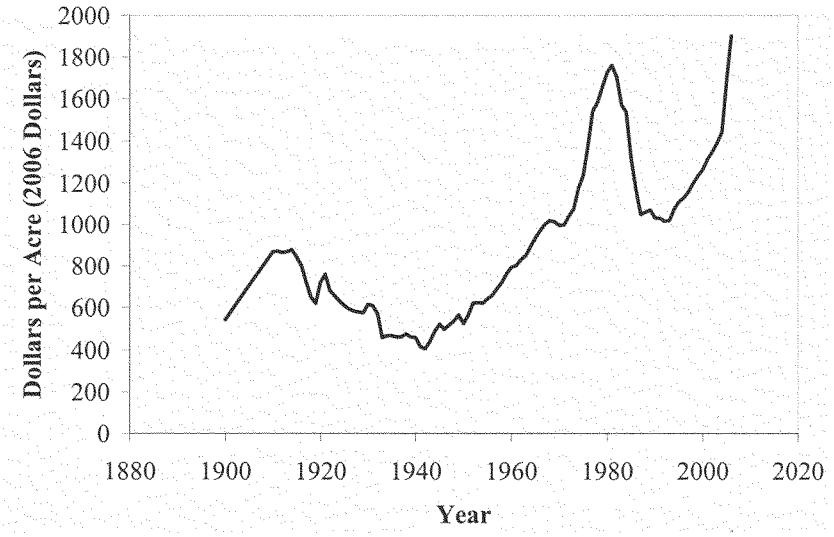

Figure 5: Real farmland values, in US 2006 dollars, per acre, decadal 1900 to 1910, annual 1911–2006. Source: author's calculations. The nominal USDA-NASS is divided by the CPI-U for the first month of the year and rescaled to 2006 dollars.

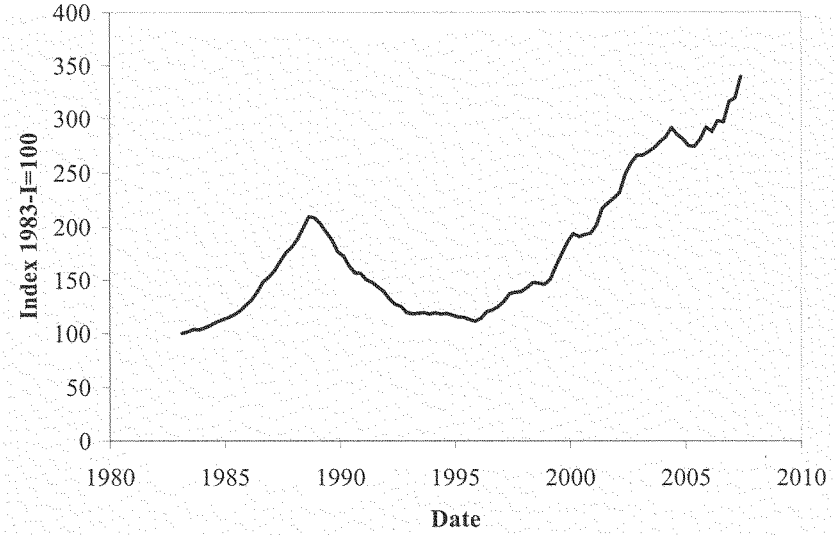

Figure 6. Greater London real home price index, quarterly, 1987–I to 2007–II. Source: author's calculations. The Halifax Greater London existing house price index is divided by the U.K. retail price index and rescaled to 1987–I=100.

LOW LONG-TERM INTEREST RATES AND HIGH ASSET PRICES[1,2]

It is widely discussed that we appear to be living in an era of low long-term interest rates and high long-term asset prices. Long rates have been commonly described as low in the 21st century, both in nominal and real terms, when compared with long historical averages, though increasing somewhat in the last few years, and especially in the past few weeks as the financial markets have been in their subprime turmoil. Asset prices have also fallen somewhat in recent months, but often remain almost at their peaks.

Stock prices, home prices, commercial real estate prices, land prices, even oil prices and other commodity prices, are said to be very high.[3] The two phenomena appear to be connected: if the long-term real interest rate is low, elementary economic theory would suggest that the rate of discount for present values is low, and hence present values should be high. This pair of phenomena, and their connection through the present value relation, is often described as one of the most powerful and central economic forces operating on the world economy today. Low interest rates seem to be viewed by many as a very powerful force of nature all over the world that guarantees that we will be in an era of high asset prices just as global warming guarantees rising sea levels all over the world.

Our conference organizers suggested that papers for this conference could consider "common beliefs about the way the world works, that, in the author's view, are not so." I thought, then, that for this paper I would critique the common view about interest rates and asset prices. I will question the accuracy and robustness of the "low-long-rate-high-asset-prices" description of the world. I will also evaluate a popular interpretation of this situation: that it is due to a worldwide regime of easy money. Among the business population, at least, it is clear that there is a common story about the causes of the current situation: monetary authorities around the world have encouraged low long-term interest rates and that these low rates have boosted asset prices all over the world, and have spurred both stock market booms and real estate booms. The catch phrase is a world "awash with liquidity." Sometimes the phenomenon is referred to as the "liquidity glut."

I will consider a theme that perhaps monetary policy has indeed been at least a small factor in promoting the high asset prices that we have seen evolving over the last decade, but that the factor's importance and reliability is overrated. The high asset prices are probably not a permanent feature of a new monetary policy regime. Perhaps, then, there is rather more instability to the high asset values that we have seen recently than some accounts have indicated.

Another, related, theme here is that changes in long-term interest rates and long-term asset prices seem to have been tied up with important changes in the public's ways of thinking about the economy. Rational expectations theorists like to assume that everyone agrees on the model of the economy, which never changes, and that only some truly exogenous factor like monetary policy or technological shocks moves economic variables. Economists then have the convenience of analyzing the world from a stable framework that describes consistent public thinking. I propose that often the *popular models*, the models of the economy believed by the public, change frequently through time, and this has driven both long rates and asset prices.[4]

This paper will begin by presenting some stylized facts about the level of interest rates (both nominal and real) and the level of asset prices in the world since 1950. Next, I will consider some aspects of the public's understanding of the economy, including common understandings of liquidity, the significance of inflation, and real interest rates, and how their thinking has impacted both asset prices and interest rates. This will lead to a conclusion that there is only a very tenuous relation between asset prices and either nominal or real interest rates, a relation that is clouded from definitive econometric analysis by the continual change in difficult-to-observe popular models.

Low Long-Term Interest Rates

Figure 1 shows nominal long-term (roughly 10-year) interest rates for eight countries and the Euro Area. With the exception of India, all of them have been on a massive downtrend since the early 1980s. Even India has been on a downtrend since the mid 1990s. The lowest point for long term interest rates appears to have been around 2003, but, from a broad perspective, the up-movement in long rates since

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[1] For "Celebration of BPEA" Conference, Brookings Institution, September 6 and 7, 2007. The author is indebted to Tyler Ibbotson-Sindelar for research assistance.

[2] By Robert J. Shiller, Professor of Economics and Professor of Finance, Cowles Foundation, Yale University, and Chief Economist, MacroMarkets LLC.

[3] See also Shiller (2007).

[4] See also Shiller (1990).

then is small, and one can certainly say that the world is still in a period of low long rates relative to the last half century. Long rates are not any lower now than they were in the 1950s, but the high rates of the middle part of the period are gone now.

Economic theory has widely been interpreted as implying that the discount rate used to capitalize today's dividend or today's rents into today's asset prices should be the real, not nominal, interest rate. This is because dividends and rents can be broadly expected to grow at the inflation rate. However, as Franco Modigliani and Richard Cohn argued nearly 30 years ago, it may, because of money illusion, be the nominal rate that is used in the market to convert today's dividend into a price.[5]

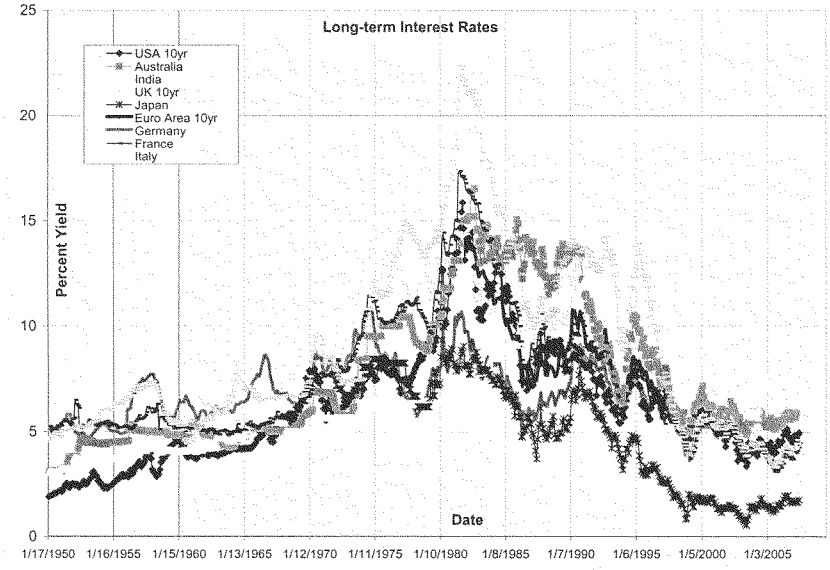

Figure 1. Long-Term (approximately ten-year) Nominal Interest Rates, 8 countries and Euro Area, monthly, 1950–2007. Source: Global Financial Data.

The cause of the downtrend in nominal rates since the early 1980s is certainly tied up with a downtrend in inflation rates over much of the world over the period since the early 1980s. So, it is interesting and important to look also at real long-term interest rates. Figure 2 shows real *ex-post* real long-term interest rates based on a 10-year maturity for the bonds. The annualized 10-year inflation rate that actually transpired was used to correct the nominal yield. For dates since 1997, the entire 10-year subsequent inflation is not yet known, and so for these the missing future inflation rates were replaced with historical averages for the last 10 years. Note that there has been a strong downtrend in *ex-post* real interest rates over the period since the early 1980s as well.

[5] Modigliani and Cohn (1979). The authors also stressed that reported corporate earnings need to be corrected for the inflation-induced depreciation of their nominal liabilities, and investors do not make these corrections properly.

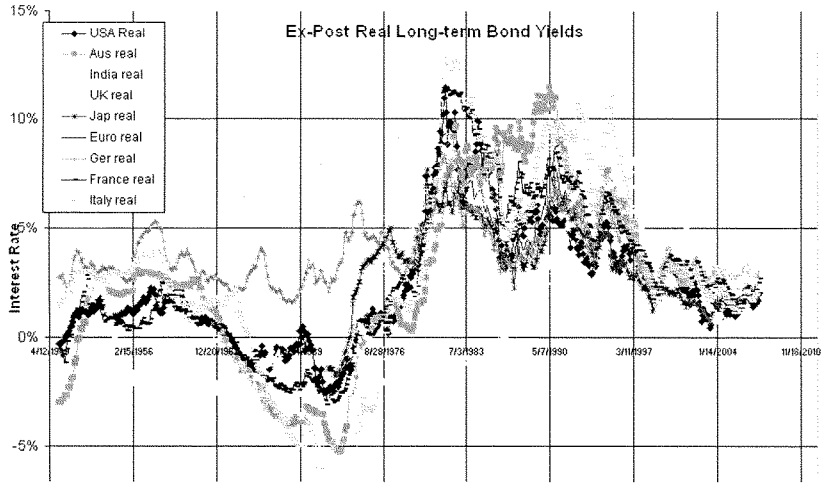

Figure 2. Ex-Post Real Long-Term (approximately ten-year) Bond Yields, 9 countries, 1950–2007. Source: author's calculations using data from Global Financial Data.

The downtrend in the *ex-post* real interest rate since the early 1980s is nearly as striking as with nominal rates. In some countries, *ex-post* real long-term rates became remarkably close to zero in 2003. Just as with nominal rates, real rates have picked up since then, and yet still remain relatively low.

However, *ex-post* real interest rates may not correspond to *ex-ante* or expected real interest rates. It seems unlikely that investors expected the negative *ex-post* real long rates of the 1970s which afflicted every country except stable-inflation Germany. It is equally unlikely that they expected the high real long rates of the 1980s. After the very high inflation of the 1970s and the beginning of the 1980s, inflation in the United States, and elsewhere, came crashing down, see Figure 3. It may be that people did not believe that inflation would stay down over the life of these long-term bonds. Tabulated inflation expectations have referred to the short term, and it may be difficult to elicit on a questionnaire long-term expectations.

Marvin Goodfriend and Robert King argued that the public rationally did not believe in the 1980s that the lower inflation would continue. They point out that the Fed under Chairman Paul Volcker (who served from 1979 until Alan Greenspan took over in 1987) announced its radical new economic policy to combat inflation in 1979, and then promptly blew their credibility at the time of the January–July 1980 recession. US CPI inflation reached an annual rate of 17.73 percent in the first quarter of 1980, and the Fed's policy had the effect of reducing that to 6.29 percent by the third quarter of 1980. But the Fed apparently lost its resolve to combat inflation with that recession, and inflation was quickly back up to 10.95 percent in the fourth quarter of 1980. Given the fact that postwar Fed efforts to tame inflation before 1980 were followed in the space of a number of years with yet higher inflation, a rational public would likely assume that inflation would again head back up in future years. Hence the expected long-team real interest rates were not as high in the early 1980s as Figure 2 would suggest. Goodfriend and King pointed out that at the time Paul Volcker himself regarded the nominal long rate as an indicator of inflationary expectations, and so implicitly assumed that the expected long-term real rate was essentially constant.[6]

[6] Goodfriend and King (2005).

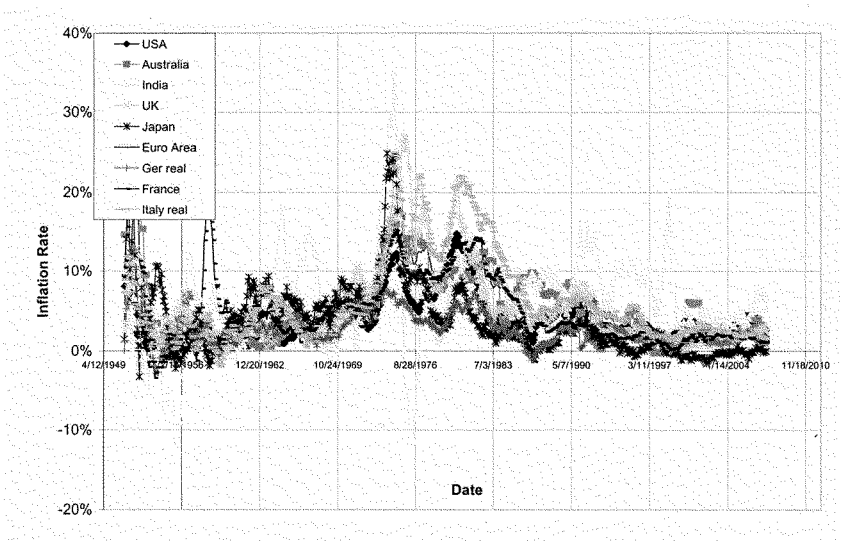

Figure 3. Annual Consumer Price Inflation, 8 countries and Euro Area, Monthly Data, 1951–2007. Source: author's calculations using Global Financial Data.

Figure 3 suggests that Goodfriend and King's focus on Paul Volcker as the stimulus for change in worldwide policy stance toward inflation may be misplaced, for, on a worldwide basis, the major turning point toward lower inflation looks more like 1975 than 1981. This was before Volcker's term as Federal Reserve Board Chairman began, so he is unlikely to be the thought leader behind this change.

The *Brookings Papers on Economic Activity* certainly played a major role in the 1970s in the change of thinking among policy authorities on monetary policy. The very first article in the very first issue, by Robert Gordon in 1970, was about the costs of monetary policy aimed at reducing inflation. In the early 1970s, the theme of dealing with the rising inflation without inducing excessive costs on the economy seemed to be the most significant theme of the *Brookings Papers*, where some of the most authoritative new thinking about this problem appeared. It seems more likely that it was the combined effect of such scholarship and discourse that changed thinking on inflation policy than that Paul Volcker single-handedly led the world into a new policy regime.

There were also opinion leaders who appealed directly to the broad public to propose strong policies to deal with inflation. Irving S. Friedman, a former chief economist at the International Monetary Fund, and then, at the behest of Robert McNamara, Professor in Residence at the World Bank, wrote a book in 1973 *Inflation: A Growing Worldwide Disaster* that may be representative of the kind of thought leadership that brought down inflation.[7] He wrote:

> The social scientist no longer enjoys the luxury and leisure to theorize and ruminate about society, economics, institutions and interpersonal relations. He is being called to act as he was during the Great Depression of the 1930s. . . . The inflation is clearly eroding the fabric of modern societies.[8]

Another Friedman was probably far more influential in arguing, effectively, for consistently tighter monetary policy. Milton Friedman made a career out of criticizing monetary policy and arguing that the growth rate of the money stock should be targeted, no matter what effects that has on interest rates or any other economic variable. It was a plausible-sounding, though radical, recipe for stopping inflation. He won the Nobel Prize in economics in 1976 and chose to give his Nobel lecture

[7] Curiously, I knew of this book because it was in the library of books left behind by the previous owners of our summer home, the only economics book in their collection. I did not accurately notice the year of publication when I first found the book, and was surprised to see my suspicion confirmed that it was first published just before the apparent inflation turning point in the mid 1970s.

[8] Friedman (1975), p ix and xi.

on the inflation problem, which was published as *Inflation and Unemployment: The New Dimension of Politics*, in 1977. He said that:

> On this analysis, the present situation cannot last. It will degenerate into hyperinflation and radical change; or institutions will adjust to a situation of chronic inflation; or governments will adopt policies that will produce a low rate of inflation and less government intervention into the fixing of prices.[9]

It is plausible that Milton Friedman was of all these people the most important thought leader who led the historic break to lower inflation. His views on inflation had real worldwide resonance. When the Volcker Fed made its momentous announcement of a new monetary policy regime on October 6, 1979, the Federal Open Market Committee in its official announcement described this as:

> A change in method used to conduct monetary policy to support the objective of containing growth in the monetary aggregates . . . This action involves placing greater emphasis in day-to-day operations on the supply of bank reserves and less emphasis on confining short-term fluctuations in the federal funds rate.[10]

These words clearly ring, in sound if not fully in substance, as an acceptance of the Friedman formula, and willingness to accept the consequences of following it.

It is easy to forget today that Milton Friedman's initial fame derived primarily from his "monetarist" solution to the inflation problem, not from his free-market ideas. A Proquest Historical Newspapers count of "Milton Friedman" scaled by the database size shows that his public prominence rose and fell with the inflation problem. Scaled references to Milton Friedman in newspapers rose 15-fold from the late 1950s to a dramatic peak in the early 1980s, just as inflation peaked, and then fell gradually back to 20 percent of the peak by the early 2000s. But, even as Milton Friedman's prominence in public discourse faded, he left behind an important change in the popular model of the economy. He created an association in the public mind between a belief in monetary policy that tolerates large swings in interest rates to preserve monetary targeting and a general belief in the importance of free markets, even though there is no logical connection between these two beliefs. By tying a belief that long-run price stability is the paramount objective for monetary policy with the emerging worldwide faith in free markets, he assured that *this time* the efforts to control inflation would not fail.

Perhaps it was thought leaders like these, now sometimes forgotten, who argued persuasively enough that inflation must be controlled that gave Volcker and other central bankers the political power to take important steps to do so. The view, as enunciated by Arthur Okun in 1978, had been that reducing inflation by monetary policy alone entails a "very costly short-run tradeoff" in increased unemployment and lost output. But the rise of inflation led to a sense of alarm, and the failure of other measures to control inflation (in the United States, the Lyndon Johnson 1968 tax surcharge on corporations and higher income individuals, the Richard Nixon Phase I price controls of 1971 and the Gerald Ford "Whip Inflation Now" plan of 1974 to reduce energy demand, expand agricultural acreage and invigorate antitrust policy) led to a increasingly widespread conventional view that the nations of the world have no choice but to tighten monetary policy considerably. It was like going on a painful diet after all the attempts at easy schemes to lose weight failed, and then feeling a smug satisfaction, as long as the diet lasts, that one had finally exerted the willpower.

But, the change in thinking influencing policymakers may not have been so clearly palpable to the public that they brought down their inflationary expectations. Thus, ex-post real rates may have shot up very high even though ex-ante real rates did not.

Market real interest rates, that is, inflation-indexed bond yields, Figure 4, have a shorter history in major countries than do ex-post real rates. In the United Kingdom, where the series begins in 1985, there is a distinct downtrend until the past few years. In the United States the path has been irregular, but the general direction has been downward since they were first created in 1997. This seems to confirm in a very rough sense that the downtrend in *ex-post* real interest rates might also be a downtrend in *ex-ante* real interest rates.

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[9] Milton Friedman (1976). http://nobelprize.org/nobel__prizes/economics/laureates/1976/friedmanlecture.pdf

[10] Board of Governors of the Federal Reserve System, Press Release, October 6, 1979.

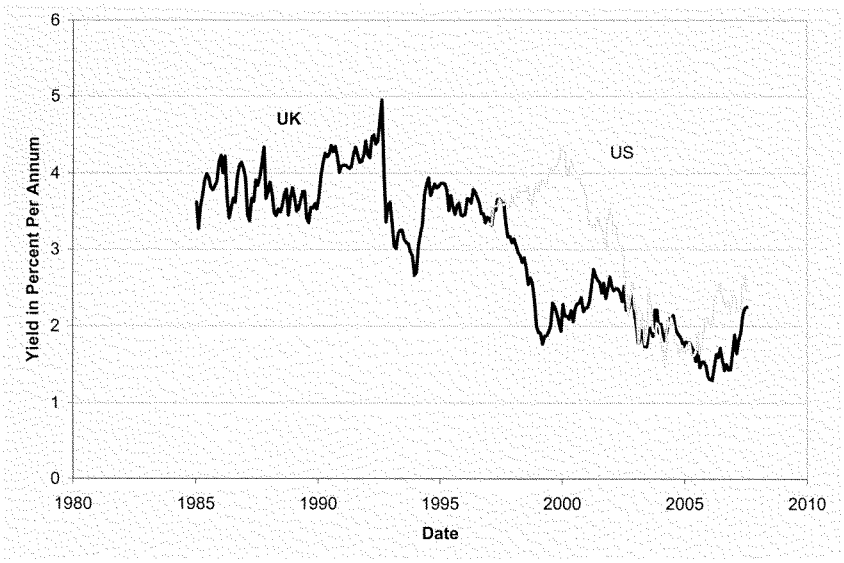

Figure 4. Ten-Year Inflation-Indexed Bond Yields, Monthly, United Kingdom, January 1985–July 2007, United States, January 1997 to July 2007. Source: Global Financial Data.

But these inflation-indexed markets are still small and not central factors in the economy and their yields may reflect inessential features of the participants in these markets. Most of these bonds are still held by institutions, not individuals.

Moreover, the path of real interest long-term rates are substantially different across the two countries since 1997 even though their asset price movements are fairly similar, as we shall see in the next section.

High Long-Term Asset Prices

Figure 5 shows real (inflation-corrected) stock prices for the same list of countries. The period around 1980, when long term interest rates were most high, was often a slow period for stock prices in many countries. In fact, with the exception of the two economic-miracle countries Japan and Germany, one could say that real stock prices were just about the same in the early 1980s, when long-term interest rates were highest, as they were in 1950.

In most countries, real stock prices have been on a major uptrend since the long-term interest rate peak in the early 1980s, as the theory would suggest, though not exactly in phase with the decline in long-term interest rates.

There was however a major downward correction in stock prices between 2000 and 2003 unexplained by any rise in long-term interest rates. In the US, real stock prices fell in half from peak to trough. A good part of the downward correction has been reversed since 2003, even though over this period long-rates have generally risen, not fallen.

Hence, one could say that the simple story that long-rates should move opposite stock prices is consistent with these data but only in a very rough sense. Stock prices were abnormally low just when long-rates had their enormous peak in the early 1980s, however, shorter-run movements in the series do not match up well.

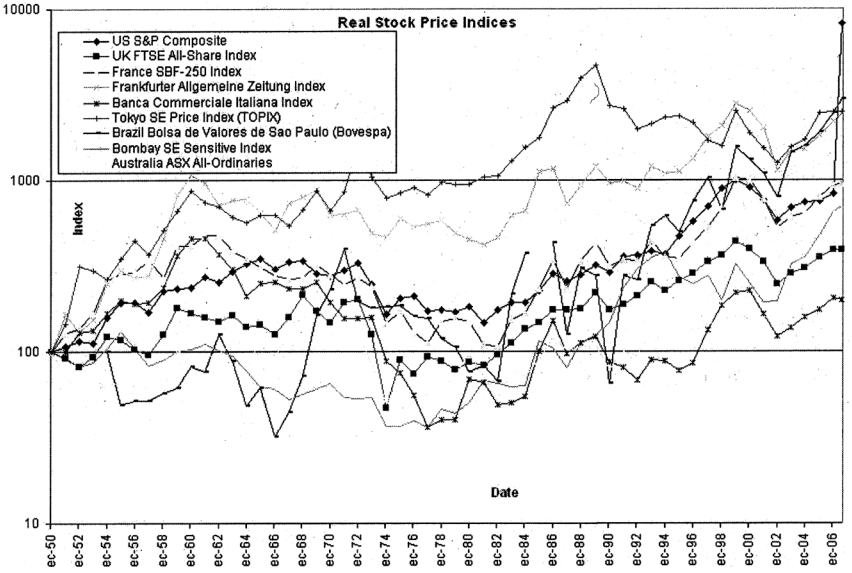

Figure 5. World Real Stock Prices, 1950–2007. Source: author's calculations using Global Financial Data.

A remarkable boom in home prices has appeared since the peak in long rates in the early 1980s. Figure 6 shows real (inflation corrected) home prices for seven countries. Five of the seven countries have shown booms. In the United States, the boom is, for the Nation as a whole, the largest since 1890. Prior home price booms seem to have been relatively contained geographically (for example, to Florida or California). The fact that the boom has become so pervasive leads one to wonder if it is indeed tied up with the trend in interest rates. However, the uptrend in home prices clearly does not begin until the late 1990s, after most of the downtrend in interest rates had passed.

It seems that, although it might seem at first that there is a substantial negative correlation historically between asset prices and interest rates, this correlation is actually very weak. However, a perception that there is such a relationship may have an influence on the market; it may help frame today's market as justifiably high.

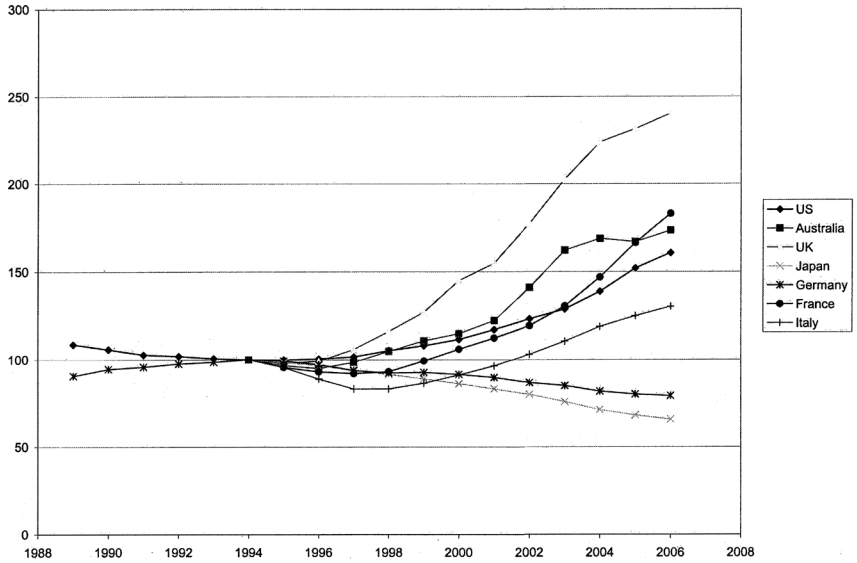

Figure 6. Real (Inflation-Corrected) House Prices, 7 of the 8 Countries Shown in Figure 1, 1994=100. Source: *OECD Economic Outlook 2007*, Statistical Annex, Table 59, "House Prices".

Awash with Liquidity

The idea that the world is "awash with liquidity" is part of the lore of the market recently, and that this notion may itself help support asset high asset prices. I tabulated the occurrence of the phrase "awash with liquidity" in English language newspapers with a Lexi-Nexis search. I found that the use of the phrase exploded upwards in 2005, and has continued high ever since. The term was also used rather frequently in the late 1990s, during the stock market boom, and also somewhat in the mid 1980s, just before the stock market crash of 1987. So, the term may be something that is just trotted out whenever the markets are rising fast.

There has been some ambiguity what a "liquidity glut," or that the world is "awash with liquidity" might be and what might be used to measure it. Reading some of the many recent newspaper accounts of this supposed phenomenon, it seems clear that some of these popular writings are confused about some of the most basic principles of economics. It definitely seems that the popular model is that when people buy stocks their money goes "into" the stock market and sits there, and so higher stock prices mean that there must be more money (liquidity) to pay for them. Probably most of these people have never heard of the economists' notion of the "demand for and supply of money," and just do not understand that asset prices can be tipped upward if everyone thinks that they should be higher even with virtually no transactions involving money. For these people, evidence that we are awash with liquidity appears to be just the high stock prices, bond prices and real estate prices lately. Monetary aggregates have not shown unusual behavior, and they do not usually seem to be referring to these.

An example of the kind of thinking appears in a recent Wall Street Journal article:

> "Lenders have been doling out increasingly large sums of money and accepting increasingly crummy conditions and meager returns on their loans. Remember those "low-doc" loans that got subprime home buyers in trouble—the ones that required minimal proof of ability to repay? These are their corporate cousins.
>
> Waves of money are coming at the markets from investors around the world. Bond and loan buyers have to put this money to work, even if the deals are shoddy." [11]

[11] Dennis K. Berman, "Sketchy Loans Abound: With Capital Plentiful, Debt Buyers Take Subprime-Type Risks," *Wall Street Journal*, March 27, 2007, p. Cl.

But, all this description of the phenomenon does not seem to offer anything more than just some colorful language to frame the observation that bond prices are higher.

Some economists have tried to give a more sensible interpretation of what these writers might be saying. Adrian and Shin (2007) argued that the phenomenon that those who use these terms might be interpreted as describing is that there is a feedback mechanism operating within investment banks and to a lesser extent commercial banks that causes them to demand more investments when asset inflation has inflated the assets on their balance sheets, so that higher asset prices tend to create through this mechanism yet higher asset prices. But, even if such a feedback is operative, it would merely mean that shocks to asset prices will tend to be amplified, whether up shocks amplified upward or down shocks amplified downward, and the theory does not tell us the source of the shocks. Their basic idea is not altogether new; the basic idea was discussed, for example, by Charles Kindleberger and Robert Aliber in 2005.

According to *Financial Times* columnist Martin Wolfe, there are two contrasting explanations for the low real interest rates around the world today: a "savings glut" and a "money glut." According to Wolfe, the savings glut theory, associated with Ben Bernanke and stock-market analyst Brian Reading, is that there has been an upward shock to the national savings of China, Japan, and the oil-exporting countries, which has caused them to export capital to the rest of the world and have the effect of flooding their markets with capital, lowering real interest rates and lowering saving there. In the "money glut" theory, which Wolfe attributes to stock market analyst Richard Duncan, the cause of the low real interest rates is the US Federal Reserve, which has held real interest rates low.

Past Scholarly Interpretations of Major Asset Pricing Movements

Economic research has noted for some time that the relation between asset prices and interest rates is not as straightforward as popular accounts often suggest. Many factors have been noted that would prevent interest rates from feeding directly into asset prices.

James Tobin inveighed against the common assumption of abstract theorists that there is perfect substitutability between risky long-term assets and bonds and that the return on capital is identical to the interest rate: "Among the relevant properties with which the theory must deal are: costs of asset exchanges; predictability of real and money asset values at various future dates; correlations—positive, negative and zero—among asset prospects; liquidity—the time it takes to realize full value of an asset; reversibility possibility and cost of simultaneously buying and selling an asset; the timing and predictability of investors' expected needs for wealth." [12] Tobin on other occasions also referred to Keynes' "beauty contest" analogy for the determination of prices in the stock market. These lines of thought led Tobin to something other than the yield on bonds to measure of the stimulus to investment demand. These ideas led to his work with William Brainard that singled out q—the price of capital relative to its replacement cost—as such a measure.[13]

William Brainard, John Shoven and Laurence Weiss estimated present discounted values of future after-tax cash-flows for a panel of 187 firms for the 1958 to 1977 period. They found that over this period there was a massive decline in the value of stocks relative to the present value of predicted real cash flows using an inflation-adjusted bond yield. They found that firms whose present value was relatively more concentrated beyond 5 years in the future declined in value more relative to the present value, suggesting that "general pessimism about the future" was at work in producing the stock market decline.[14]

William Brainard, Matthew Shapiro and John Shoven calculated for a panel of US firms a "fundamental return" equal to the after tax net of depreciation cash flow divided by the net replacement cost of its physical assets and compared that to actual return in the market, finding only a 0.05 correlation between the two using aggregate US data 1963–85. The correlation between fundamental return and bond return over this period was minus 0.28.[15]

Olivier Blanchard constructed a world real medium-term interest rate 1978–93 using a present value of inflation forecasts, and compared this to a world dividend-price ratio—the two had opposite trends and no significant short-term correlation. The short-run movements in the equity premium were found to correlate with infla-

[12] Tobin (1961) p. 28.
[13] Brainard and Tobin (1968).
[14] Brainard, Shoven and Weiss (1982), p. 502.
[15] Brainard Shapiro and Shoven, Table 5 p. 41. They also calculated a "fundamental beta" and found that it helped explain expected return across stocks above and beyond market beta.

tion, suggesting a possible element of truth to the Modigliani-Cohn theory of money illusion and the stock market.[16]

The Dynamic Gordon Model and Dividend Yields

The model one hears most often in connection with the level of asset prices is the Gordon Model[17]:

$$P = \frac{D}{R - g}$$

Where P is price, D is dividend, R is the long-term interest rate, and g is the expected growth rate of dividends. Or,

$$\frac{D}{P} = R - g$$

Where D is dividend per share, P is price per share, R is the long-term interest rate, and g is the expected long-term growth rate of dividend. R and g can be either both nominal or both real. Of course, nominal interest rates are most commonly used, but the idea that g is expected to be constant might better be used if we suppose it is a real growth rate.

Gordon himself derived this equation as a steady state relation, and did not have time subscripts, but it is common today to assume that the model holds at each point of time. John Campbell and I proposed a "dynamic Gordon model", based on a log-linearization of the present value relation. In an efficient market as we defined it, the dividend yield should be given by:

$$\delta_t = \sum_{j=0}^{\infty} \rho^j E_t[r_{t+j} - \Delta d_{t+j}] + c$$

Where δ_t is the log of the dividend price ratio at time t, ρ is the discount factor implicit in the linearization, r_{t+j} is the one-period interest rate at time $t+j$, d_{t+j} is the log dividend at time $t+j$, and c is a constant term. Note that it is the same as the Gordon model, essentially, except that instead of using long-term interest rates and growth rates, we use the present value of one-period interest rates and one-period growth rates of future dividends. This is a nice model in that it has some interesting predictions about the changes through time in the dividend price ratio as it relates to the expected time path of future interest rates and dividend growth rates. But using a vector-autoregressive model for δ_t, Δd_t-r_t, and the earnings-price ratio, we found assuming rational expectations with US data 1871-1987 that the correlation between the theoretical log dividend-price ratio and the actual was only 0.309 and the ratio of the standard deviation of the theoretical dividend price ratio and the actual dividend price ratio was only 0.58. (The latter is a suggestion of excess volatility of stock prices, but it is not a proper measure of this since dividends show some short-run volatility.)

Figure 7 shows a plot of stock market dividend yields for the same countries that we saw in Figure 1.

[16] Blanchard (1993).
[17] Gordon (1962).

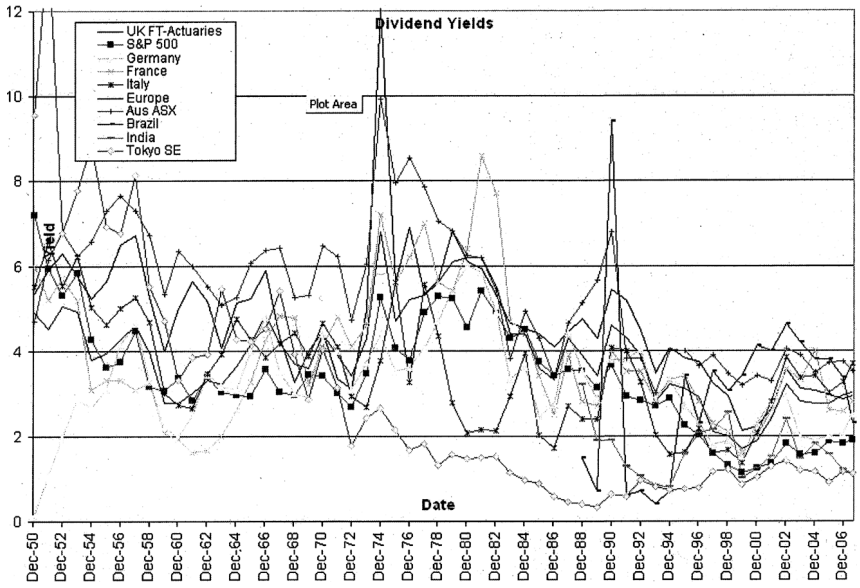

Figure 7. World Stock Market Dividend Yields, 1950 to 2007. Source: Global Financial Data.

Notably, the very high real interest rates in the late 1970s to early 1980s do seem to correspond to somewhat to high dividend yields, at least when compared with recent years. But the correspondence with interest rates is not compelling, and seems to apply only in comparisons with the relatively brief period of anomalously high interest rates and inflation in the late 1970s to early 1980s. And the high dividend yields then were not so high as interest rates would suggest. In the US, for example, dividend yields in the early 1980s were at about the same level as in the early 1950s. This fact was noted by Blanchard and Summers, who, in their Brookings paper in 1984 wrote "One would expect that a sharp increase in real interest rates at long maturities, caused by fiscal and monetary policies, would depress stock prices significantly. Yet in all major countries, real stock prices have been surprisingly strong. Dividend-price ratios have in no way followed real rates on long-term bonds." [18]

The Real Interest Rate in the Public Mind

The theory presumes that real interest rates are natural concepts to use to describe public decisions. However, in fact, the real interest rate is not even a concept that many people use to frame their decision-making when they think about asset prices.

The concept of the real interest rate dates back to 1895 with Columbia University economics professor John Bates Clark whose name is memorialized in a prestigious economics medal that the American Economic Association awards today. In describing the concept, he seemed to be presenting it as a strikingly original new idea that he needed to explain at some length. He wrote about a widespread confusion, that he discerned in the then-current debate about bimetallism, about the interpretation of interest rates. Discussing the example of a debtor in an environment with 1 percent deflation, he noted that "If he pays a nominal rate of five percent in interest, he may pay a real rate of six." [19] But, his use of "real rate" was apparently not convincing enough to coin a new popular term. In the following year, 1896, Yale University's Irving Fisher wrote about the same popular confusion, but did not use the term "real rate" but instead "virtual interest in commodities." He also noted the lack of public understanding of the basic concept: "It is an astonishing fact that the connection between the rate of interest and appreciation has been almost completely

[18] Blanchard and Summers (1984) p. 274.
[19] Clark (1895) p. 62.

overlooked, both in economic theory and in its bearing upon the bimetallic controversy."[20] He was right to be astonished, for indeed the significance of any interest rate depends critically on the inflation rate, and quoting nominal interest rates alone may be regarded as almost meaningless.

Clark's long discourse on the elementary concept of real interest rates and Fisher's astonishment at the lack of public understanding reflect their recognition of the importance of what today are classified as behavioral biases in popular economic thinking, notably a bias called "money illusion," a term coined by Fisher in 1928. But, failure to think in terms of real interest rates rather than nominal rates, while it may be described as an "illusion," is perhaps better described as just an abject failure to understand the concept. The concept of real interest rate remains totally absent from the popular model of the economy.

Indeed, long after they first discussed it, the concept of the real interest rate still did not even enter the language. People need to understand the concept of real interest rate if they are to make the dynamic Gordon model work. If they cannot grasp the concept, then it is hard to see how they will immunize themselves from the money illusion described by Modigliani and Cohn.

Modigliani and Cohn made it part of their argument in 1979 that stock prices are determined by nominal, not real rates, that few news media or business people ever refer to the concept of real interest rates for the discounting of future corporate cash flows or to the correction that must be made to corporate earnings for the real value of the interest owed by the corporation:

> . . . the financial press kept asserting that earnings-price ratios had to be compared with nominal interest rates, while not even mentioning the fact that profits of firms with large debts should be adjusted for the inflation premium. To be sure, the financial press may not be the best source of information about how investors value equities. We therefore endeavored to secure recent memoranda from large brokerage firms advising institutional investors; in virtually every case, it was clear that analysts did not add back to earnings the gain on debt, and that they also relied at least partly on the capitalization of earnings at a nominal rate.[21]

With modern day search procedures, we can do a more thorough job of discovering how often nominal interest rates are corrected for inflation. Based on a Proquest search of major newspapers, we found that the term "real interest rate" was first used in the popular press in the modern meaning, quoting an Institute of Life Insurance study, in 1946, fifty years after the concept was established in professional economics journals.[22] The words "real interest rate" were occasionally used before that to refer to other things (for example in criticizing bad lending practices that calculated interest rates from a fictitious base).

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[20] Fisher (1896) p. 4.

[21] Modigliani and Cohn (1979) p. 35.

[22] Christian Science Monitor, "'Real Return' on Saving Found 43 P. C. below 1939," November 26, 1946, p. 15.

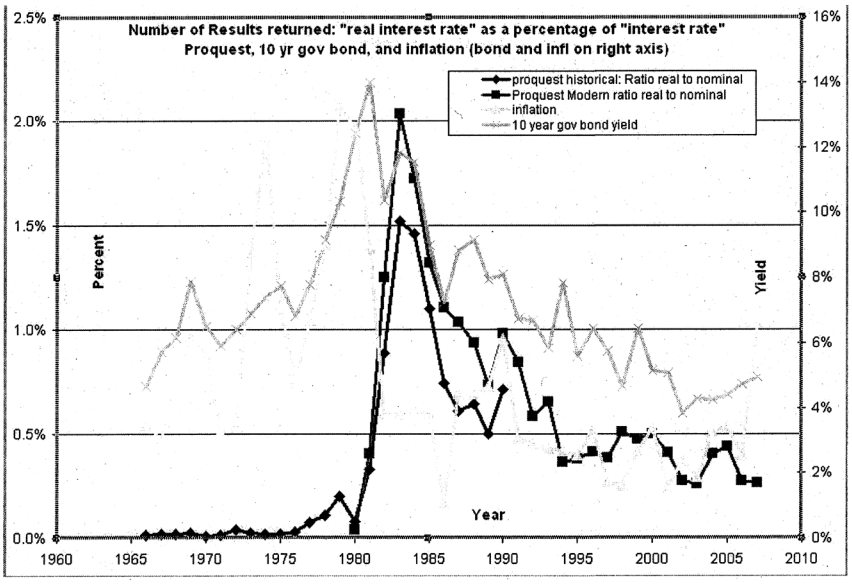


Figure 8. Number of US newspaper articles that mention "real interest rate" as percent of number of newspaper articles that mention "interest rate," annual data, in two databases, Proquest historical and Proquest modern. Also shown are the inflation rate (CPI-U change from December of preceding year to December of year, except for 2007 which shows annualized six-month change for first half of year), and the ten-year government bond yield. Source: author's calculations using data from Proquest, U.S. Bureau of Labor Statistics, and U.S. Federal Reserve.

Figure 8 shows the relative incidence of the term "real interest rate" when used in its modern meaning in US newspapers in the Proquest Newspapers data bases (historical and modern) relative to "interest rate" since 1960. Between 1890 and 1960 there was only one reference to real interest rates (as noted above, in 1946). The frequency of references to real interest rates has been extremely low, never more than a few percent of references to interest rates. Even those levels of references to real interest rates have been dropping off precipitously. The concept of "real interest rate" appears to have had its day and is dying. Note that the frequency of use of "real interest rate" picked up with the inflation of the 1970s, but can hardly be described as an automatic response to high inflation since there were earlier high inflation periods that had no use of the term.

It was suggested that perhaps the term "real interest rate" has merely been replaced over time by "interest rate adjusted for inflation" and so that Figure 8 might misrepresent the actual use of the concept of real interest rate. But the term "interest rate adjusted for inflation" is self explanatory, does not assume reader knowledge of any concept and so does not seem to be as relevant to search on as "real interest rate." Nevertheless, I did a search among newspapers in the Proquest Modern data base for "interest rate adjusted for inflation" or "inflation adjusted interest rate" or "inflation-adjusted interest rate." These terms together are indeed much rarer than "real interest rate," and articles that mentioned any of these terms never amounted to 0.25 percent of the number of articles that mentioned "interest rate." Moreover, the pattern of the usage of these terms is much the same as shown in Figure 1, declining in recent years, though usage of these terms as a fraction of usage of "interest rate" peaked somewhat later, in 1990.

Figure 9 shows the use of the term real interest rate in annual reports in the Proquest data base of corporations' annual reports, within 5-year time periods at 5-year intervals. The same spike in usage of the term appears in these reports in 1980–4. Remarkably, not a single annual report used the term "real interest rate" in 1995–9 or 2000–4, among over 2000 annual reports in the database in both of

those 5-year intervals.[23] As with the newspaper data set, the number of annual reports that used the term "real interest rate" peaked at only 1.8 percent of the number of annual reports that used the term "interest rate." Note also that the word "interest rate" has grown dramatically over this sample, from 17.7 percent of annual reports in 1960 to 93.5 percent in 1980, and has stayed at around 90 percent ever since. The effect of the 1980 interest rate peak had its effect on both "real interest rate" and "interest rate," but the effect was permanent only on the latter.

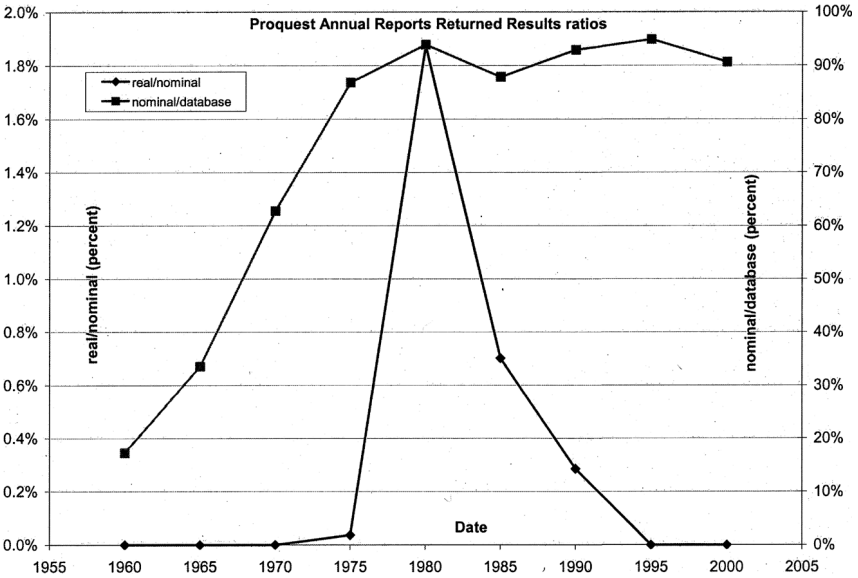


Figure 9. Number of annual reports in which real interest rates are mentioned as a percent of the number of annual reports in which interest rates are mentioned. Also, number of annual reports which mention interest rates as a percent of the number of annual reports in the database, five-year intervals from 1960–64 to 2000–2004. Source: author's calculations using Proquest Annual Report Database. [9/9/07 revision]

We have been unable to find any single thought leader who was particularly associated with the explosion around 1980 in the use of the "real interest rate." It appears that the term sprang into sudden popularity after 1980, peaking in 1983, when there was a major jump in the real interest rate after the aggressive Volcker monetary policy, which resulted in the early years of the 1980s in a sharp fall in inflation even as nominal interest rates were kept high. The real interest rate concept became suddenly interesting because real interest rates has moved so much so fast, and because the movement was associated with aggressive actions by the monetary authority. Perhaps too it got some interest because of the story-quality of the dramatic figure of Paul Volcker on his mission to break the cycle of inflation, although Volcker was never quoted in the news media from 1979 to 1981 using the term himself. But the abstract concept of real interest rates fell out of public consciousness after its movements turned into a gradual fall with no dramatic story connected with it.

The real interest rate concept still seems highly relevant in judging the high asset prices we observe, but the public won't buy it. I know this from personal experience, when I talk with news reporters and attempt to refer to the concept. They listen patiently and change the subject, and sometimes even offer that their readers don't relate to such a concept.

The Treasury Inflation-Protected Security (TIPS) market started in the US in 1997. The term "real interest rate" did not take off with the development of this

[23] A search was done in the same annual report database for "interest rate adjusted for inflation," or "inflation adjusted interest rate," or "inflation-adjusted interest rate." Amazingly, none of these terms was ever used in any annual report in this database.

market. The US Treasury does not use the term "real interest rate" in association with their sale and marketing, instead they refer just to "yield" on the Inflation-Indexed Security. The stark reality and central importance suggested by John Bates Clark's term was never suggested by the words that surround TIPS. Part of the relative lack of popularity of TIPS (only 8 percent of the US Federal national debt) is that they have not been marketed as solving fundamental problems or providing important price discovery.[24]

In my book *New Financial Order: Risk in the 21st Century* (2003) I argued that governments around the world should adopt new units of measurement for real values, indexed units of account, like the *Unidad de Fomento* that Chile adopted in 1967, and educate their publics to use these units for contracts instead of currency. I proposed that the units be called "baskets" so that people can appreciate that by trading in these terms, they are trading in the market baskets that underlie the consumer price index. Only a major step like this could eliminate money illusion. Needless to say, no country has taken my advice.

The Recent Quietness of Markets

Stock markets in many countries of the world have been extraordinarily quiet during the current boom. Figure 10 shows the 100-day moving standard deviation of 1-day stock market returns using the S&P 500 (composite before 1957) index from January 4, 1950 to August 10, 2007. The period since 2003 stands out for its low standard deviations. Even the big stock market moves of February 27 2007 and August 9 2007 did not bring the standard deviation up very much. There was a tremendous buildup of volatility during the 1990s boom, followed by an enormous letdown in volatility.

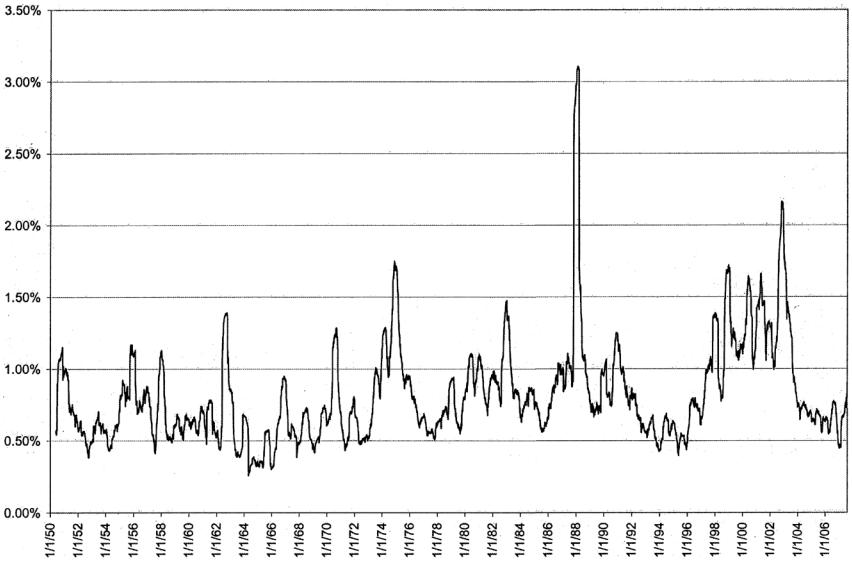


Figure 10. Moving average 100-day (ending on date shown) standard deviation of the percentage change in the S&P 500 (Composite before 1957) Stock Price Index. Source: author's calculations using data from Standard & Poor's.

[24] According to *Treasury Bulletin*, federal debt securities held by the public first passed $5 trillion in February 2007 (Table FD–1), and in that month TIPS amounted to $411 billion (Table FD–2). Federal Reserve Flow of Funds Accounts, Table B100, show household net worth at $56.2 trillion in the first quarter of 2007, and hence TIPS amount to well under 1 percent of net worth, and even that held largely by institutions and foreigners.

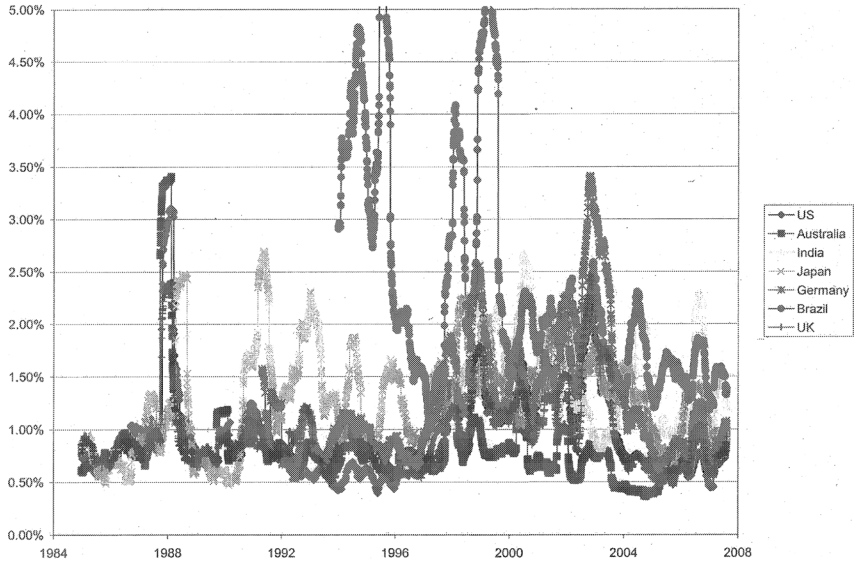


Figure 11. One-hundred day moving standard deviations of daily price changes, daily data December 19, 1984 to August 10, 2007, seven countries. Source: author's calculation using closing prices nominal stock price indices, S&P 500, ASX All-Ordinaries, BSE 30, Nikkei 100, Dax, CAC 40, Bovespa, FTSE 100.

The decline in volatility is a striking reminder that factors other than the discount rate stand a good chance of playing a major role in producing high asset prices. For the Gordon model if anything suggests just the opposite from quietness in the markets, since if interest rates used to discount in present value formulas are low, then unless there is less variability in the news about future dividends, volatility should be higher. Fluctuations in g in Gordon's formula will have a bigger impact on price if r is smaller. This point was stressed recently by Gyourko, Mayer and Sinai to explain the higher volatility of home prices, but it works the wrong way in explaining the lower volatility of stock prices.[25]

Conclusion

We have seen here that the big movements in stock prices and real estate prices in the last decade or so do not line up with movements in long-term interest rates over the same time period. This appears to confirm the 1988 results of Campbell and Shiller that stock prices relative to dividends or earnings are not well explainable in terms of present value models with time-varying interest rates. Yet if we are doing very broad comparisons of the present time with another time, comparing the early 1980s when interest rates were very high with today, we might say that lower nominal interest rates are indeed a factor in the relatively higher asset prices we see today.

The Modigliani and Cohn (1979) money-illusion theory of stock prices has always seemed a little unsatisfactory since it describes people as understanding enough about inflation so as to push nominal rates up in high inflation periods but not understanding it well enough that they should realize that these high nominal rates should not be used to discount today's dividend into a low price. It may not seem like a sound approach to economic theorizing to assume that people understand some applications of a concept and not others.

But we have seen above that people do not even talk about the concept of real interest rates today, and so it certainly stands as plausible that they would be vulnerable to errors in handling all ramifications of the concept equally well. The natural framing of stock market reports involves dividend-price ratios and earnings-price ratios, which are already framed so that they can easily be compared with nominal interest rates. Moreover, public understanding about a world "awash with

[25] Gyourko Mayer and Sinai (2006).

liquidity" may be reinforced by their perception of an era of low nominal rates, and may help reinforce errors in pricing. Behavioral economics has always had to confront a public's partial understanding of economic concepts, of mental compartments, of framing effects that distort judgment.

This paper has discussed one simple explanation of the asset booms since the mid 1990s, that they are a direct consequence of falling long-term interest rates. I have not offered another theory of the high asset prices. Presumably, as I discussed in *Irrational Exuberance*, there are many factors, including speculative feedback, that have contributed to high asset prices today.

This paper began by considering a certain common belief about the way the world works which was motivation for this paper. We see that the idea that we should think of the level of long-term real interest rates as the dominant force in driving long-term asset prices up or down is not supported by the evidence.

References

Adrian, Tobias, and Hyun Song Shin, "Liquidity and Financial Cycles," presented at 6th BIS Symposium: Financial System and Macroeconomic Resilience, Brunnen, Switzerland, June 18, 2007.

Blanchard, Olivier J., and Lawrence H. Summers, "Perspectives on High World Real Interest Rates," *Brookings Papers on Economic Activity*, 1984–2 pp. 273–324, 1984.

Blanchard, Olivier J., "Movements in the Equity Premium," *Brookings Papers on Economic Activity*, 2–1993, pp. 75–118.

Brainard, William C., Matthew D. Shapiro and John B. Shoven, "Fundamental Value and Market Value," *Money, Macroeconomics and Economic Policy: Essays in Honor of James Tobin*, Cambridge MA: MIT Press, 1991.

Brainard, William C., John B. Shoven and Lawrence Weiss, "The Financial Valuation of the Return to Capital" *Brookings Papers on Economic Activity*, 2:453–511, 1980.

Brainard, William C., and James Tobin, "Asset Markets and the Cost of Capital," in Richard Nelson and Bela Balassa, Editors, *Economic Progress, Private Values and Public Policy: Essays in Honor of William Fellner*, Amsterdam: North Holland, 1977.

Brainard, William C. and James Tobin, "Pitfalls in Financial Model Building," *American Economic Review Papers and Proceedings*, 58:99–102, May 1968.

Brunnermeier, Markus, and Christian Julliard, "Money Illusion and Housing Frenzies," unpublished paper, Princeton University, June 7, 2007.

Campbell, John Y., Kermit Schoenholtz and Robert J. Shiller, "Forward Rates and Future Policy: Interpreting the Term Structure of Interest Rates, *Brookings Papers on Economic Activity*, pp. 173 224, 1 1983.

Campbell, John Y. and Robert J. Shiller, "Stock Prices, Earnings, and Expected Dividends," *Journal of Finance*, 43:661–76, 1988.

Clark, J. B., "The Gold Standard of Currency in the Light of Recent Theory," *Political Science Quarterly*, 10(3):383–97, September 1895.

Fisher, Irving, "Appreciation and Interest," *Publications of the American Economic Association*, 11(4):1–98, July 1896.

Fisher, Irving, *The Money Illusion*, New York: Adelphi, 1928.

Friedman, Irving S., *Inflation: A Growing World-Wide Disaster*, Garden City: Anchor Books, 1975.

Friedman, Milton, *Inflation and Unemployment: The New Dimension of Politics*, Transatlantic Arts, 1977.

Goodfriend, Marvin, and Robert King, "The Incredible Volcker Disinflation," NBER Working Paper No. 11562, August 2005

Gordon, Myron, The Investment, Financing and Valuation of the Corporation, Homewood Illinois: Irwin, 1962.

Gordon, Robert J., "The Recent Acceleration of Inflation and Its Lessons for the Future," *Brookings Papers on Economic Activity*, I–8–47, 1970.

Gyourko, Joseph, Christopher Mayer and Todd Sinai, "Superstar Cities," Cambridge MA: National Bureau of Economic Research Working Paper No. 12355, July, 2006.

Kindleberger, Charles P., and Robert Z. Aliber, *Manias, Panics and Crashes: A History of Financial Crises*, Fifth Edition, Palgrave-MacMillan, 2005.

Modigliani, Franco, and Richard Cohn, "Inflation, Rational Valuation, and the Market," *Financial Analysts Journal*, pp. 22–44, March–April 1979.

Okun, Arthur M., "Efficient Disinflation Policies," *American Economic Review*, 68:348–52, May 1978.

Shiller, Robert J., *Irrational Exuberance*, 2nd Edition, Princeton: Princeton University Press, 2005.

_____, "Speculative Prices and Popular Models," *The Journal of Economic Perspectives*, 4(2):55–66, Spring 1990.
_____, "Stock Prices and Social Dynamics," *Brookings Papers on Economic Activity*, pp. 457 98, 2 1984.
_____, "Understanding Recent Trends in House Prices and Home Ownership," paper presented at the Federal Reserve Bank of Kansas City's Jackson Hole Symposium, August 31–September 1, 2007
Tobin, James, "Money, Capital, and Other Stores of Value," *American Economic Review*, 51:26–37, 1961.
Wolf, Martin, "Who are the Villains and the Victims of Global Capital Flows?" *Financial Times*, June 13, 2007, p. 11.

PREPARED STATEMENT OF MARTIN EAKES, CEO, CENTER FOR RESPONSIBLE LENDING

Chairman Schumer, Ranking Member Saxton, Vice Chair Maloney, and members of the Committee, thank you for holding this hearing to focus on how the alarming rate of losses on subprime mortgages is affecting consumers, the U.S. economy, and global financial markets. We commend you for focusing on the problem and seeking positive solutions.

I testify as CEO of Self-Help (www.self-help.org), which consists of a credit union and a non-profit loan fund. For the past 26 years, Self-Help has focused on creating ownership opportunities for low-wealth families, primarily through financing home loans. Self-Help has provided over $5 billion of financing to over 55,000 low-wealth families, small businesses and nonprofit organizations in North Carolina and across the country.

Self Help is a subprime lender, and our loan losses have been less than one percent per year. We are small compared to the commercial finance companies that have produced most subprime loans, but we, too, provide mortgages to people who have lower incomes and credit blemishes. The biggest difference is that we avoid making loans that begin, from the first day, with a high chance of failing; we assess whether the borrower can pay the loan back; and we structure the loan in a way that promotes sustainability. This is Risk Management 101, a course that lenders in the prime market have followed for decades.

In addition to my experience with Self Help, I am also CEO of the Center for Responsible Lending (CRL) (www.responsiblelending.org), a not-for-profit, non-partisan research and policy organization dedicated to protecting homeownership and family wealth by working to eliminate abusive financial practices. We work with many other concerned groups to eliminate predatory lending practices and encourage policies that protect family wealth.

During these past few months—as subprime foreclosures shot up to alarming levels, as over 100 mortgage companies closed their doors and laid off tens of thousands of employees, as investments collapsed and banks on several continents felt compelled to take action—the mortgage industry has tried to downplay the enormous damage caused by reckless subprime lending.

I. STATE OF THE MARKET

Today I want to make these points:

- The rate of foreclosures on subprime loans is severe.
- The problem of foreclosures on subprime mortgages is widespread, and has already had a significant negative impact on people with and without subprime mortgages, as well as the economy at large.
- Subprime foreclosures will get much worse in the near future.
- Tightening of credit has been caused by an industry that has run too loosely and without sufficient regulation.
- Market forces are not correcting the situation.
- The impact on homeowners is devastating. We provide one real-life example out of millions.

II. POLICY RECOMMENDATIONS

The good news is that workable solutions exist. On the most basic level, we need to ensure that lenders return to common-sense lending that is likely to produce sustainable homeownership. At the same time, we need to do all we can to minimize the damage to families who are struggling today. Our policy recommendations focus on two major areas.

A. PROTECTING HOMEOWNERS IN THE FUTURE

First, we need strong predatory lending protections to protect homeowners in the future. These include a number of measures that have already been incorporated into state laws and/or guidance issued by regulators.

• Require lenders to determine that their customers have the ability to repay the loan at the fully indexed rate, assuming fully amortizing payments.
• Require lenders to verify a customer's income using tax documents, payroll or bank records, or other reasonable documentation.
• Require lenders to escrow for real estate taxes and property insurance.
• Ban prepayment penalties and yield-spread premiums on subprime loans.
• Eliminate steering families into unnecessarily expensive loans.
• Hold lenders responsible for abusive lending practices, regardless of whether the loan was originated by the lender or mortgage brokers.
• Hold mortgage brokers accountable for abusive lending practices by establishing rigorous affirmative duties to serve the best interests of their customers.
• Through assignee liability, hold investors accountable for the loans they support.
• Allow the states to continue to take actions to prevent predatory lending.

B. PROTECTING HOMEOWNERS NOW THREATENED WITH FORECLOSURE

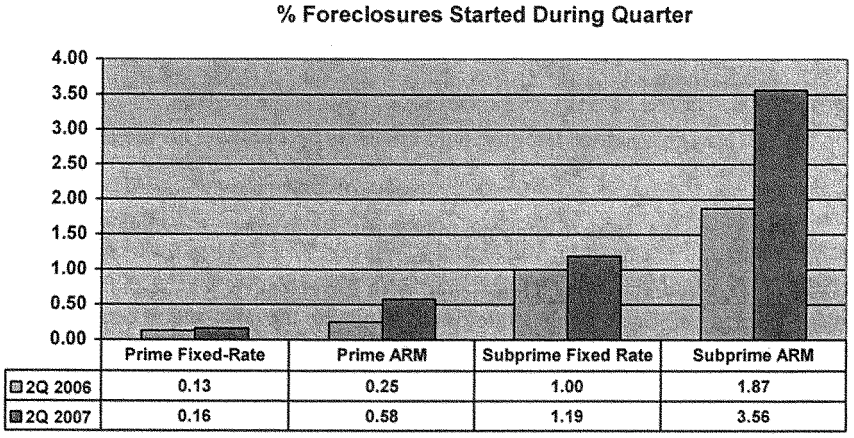
Second, we need to employ sensible strategies to minimize the devastation caused by bad loans that have already been made by helping families avoid foreclosure. In recent weeks, some have tried to frame sensible solutions as a "borrower bail-out." This is absurd. First, any effective measures for addressing the foreclosure crisis will not only help homeowners, they will help entire communities and the nation's economy as a whole. Second, no one is proposing to remove all debt obligations from homeowners—families will still need to make timely mortgage payments. We and other concerned groups are proposing policy solutions that center on these actions:

• Direct servicers and lenders to make meaningful and sustainable modifications to existing loans.
• Eliminate an anomaly in the Bankruptcy Code, which currently allows judges to modify unaffordable mortgages on a vacation home or investment property, but not on the homeowner's primary residence.

III. STATE OF THE MARKET—DISCUSSION

A. THE FORECLOSURE PROBLEM IS SEVERE.

Every credible quantification of subprime foreclosures reveals that the problem is severe. The 2nd Quarter National Delinquency Survey, recently released by the Mortgage Bankers Association (MBA), shows that foreclosures on all types of loans have increased, but, as expected, foreclosures in the subprime market are most severe. New foreclosures on subprime adjustable-rate loans in the second quarter 2007 are 90% higher than the same time last year, compared with a 23% increase on prime fixed-rate loans.



Source: MBA National Delinquency Survey

At the same time, the MBA's "point in time" foreclosure statistics mask the extent of the foreclosure problem, because their figures fail to include the high number of subprime loans that were originated recently and have yet to enter their peak foreclosure years. CRL issued a study in December 2006 ("Losing Ground"[1]) estimating that *one out of every five subprime mortgages made in 2005 and 2006 ultimately will end in foreclosure*. This projection refers to actual homes lost, not late payments or foreclosures started but not completed.

When we released our report on subprime foreclosures, the lending industry claimed that our findings were overly pessimistic. Even today, the Mortgage Bankers Association continues to insist that the foreclosure problem is relatively small, and that only about 250,000 households with subprime mortgages will lose their homes. Their figure comes from a mis-reading of the research described in the Losing Ground report. As shown here, CRL's estimate is in line with other credible projections:

	Loans Analyzed	# Loans in Analysis	Projected Foreclosure Rate	# Projected Foreclosures
MBA	Not disclosed	Not disclosed	Not disclosed	250,000
CRL	Subprime loans, owner-occupied properties, 2005 & 3Qs 2006.	5,800,000	19.4%	1,125,000
First American Real Estate Solutions.	All adjustable rate mortgages issued in 2004 & 2005[2].	7,700,000	14.3%	1,100,000
Lehman Brothers	Subprime loans, 2006 vintage only[3].	4,000,000[4]	30%	1,200,000
Moody's Economy.com	All loans[5]	Not disclosed	Not disclosed	1,700,000

By any measure, these estimates represent an epidemic of home losses. These foreclosures will not only harm the families who directly lose their homes, but the ripple effects have already begun to extend to the wider local, national and international communities.

B. THE FORECLOSURE PROBLEM IS WIDESPREAD.

The MBA's recent delinquency report also shows that mortgage loans entering foreclosure have increased in 47 states since this time last year. On average, the increases were 50% higher. Only four states—North Dakota, South Dakota, Utah and Wyoming—did not experience increases in new foreclosures. Less than two percent of the American population live in those states.

When releasing the survey, the MBA downplayed new foreclosures by focusing only on changes between the last two quarters. But any minor changes from one quarter to the next are largely meaningless. *The foreclosures occurring today are the worst they've been in at least 25 years.* In essence, the MBA's defense of a dismal situation is, "The house is on fire, but the temperature has dropped by three degrees in most rooms."

The MBA has also been quick to claim that the performance of subprime loans is primarily a result of local economic conditions, not loan products or underwriting practices. In fact, it is not an either-or proposition. Local economic conditions can affect house prices appreciation and unemployment levels, which affect foreclosure rates. However, subprime loans have typically included features that are known to increase the rate of foreclosure. Economic studies and empirical research also have shown that the incidence of foreclosure escalates quickly due to "layered risk" factors (e.g. low downpayments, high debt-to-income ratios, adjustable interest rates, etc.)—exactly the types of loans that have dominated the subprime market in recent years.

Furthermore, if local economic conditions were the dominant factor in subprime loan performance, then there would be little distinction between the performance of subprime loans and FHA loans, which are also aimed at riskier borrowers. However, the MBA's own statistics show subprime loans perform worse than FHA loans in the same market:

	% of Outstanding Loans in Foreclosure at end of 2Q 2007	
	Subprime	FHA
Northeast	5.76	2.42
North Central	8.76	3.45
South	4.50	1.76
West	4.40	1.23
United States	5.52	2.15

Source: MBA National Delinquency Survey, 2Q 2007

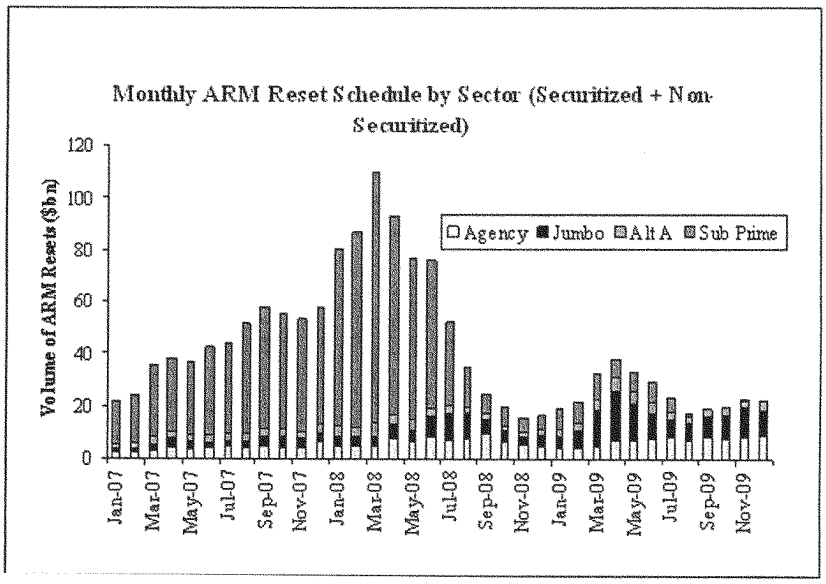
Lastly, the MBA has claimed that defaults on non-owner occupied properties are the major driver for increased subprime foreclosures.[6] However, 88% of foreclosures are suffered by people living in their primary residence.[7] A higher rate of foreclosures on investor properties is not a new development—default risks have always been significantly higher for investor properties compared with owner-occupied homes.[8] We question why the MBA is surprised by this result, if lenders were making subprime loans with loose underwriting standards to this even-riskier class of borrower. Moreover, this type of lending did nothing to increase homeownership, and instead fueled speculative home-buying, short-term run-ups in house prices, and now increased foreclosures and falling home values that are hurting all the families in these neighborhoods.

The cost of the subprime problem extends far beyond lost homes and ruined neighborhoods with dropping property values. Over 100 mortgage lenders already have gone out of business and thousands of workers have lost their jobs. It's harder for mortgage lenders and firms in other business lines to get credit from once-burned, twice-shy investors. The stock market is increasingly volatile and the housing market is facing its first national decline since house prices started being measured in the 1950s. All these factors spell slower (or even negative) economic growth in the U.S and—with German banks worried about subprime loans made in Chicago—bleak prospects for help from players in other global financial markets.[9] (See Appendix 1 for a list of mortgage firms sold, closed, or bankrupt as of the end of August, as well as a list of other financial transactions affected by the credit crunch.[10])

C. SUBPRIME FORECLOSURES WILL GET MUCH WORSE IN THE NEAR FUTURE.

It is important to recognize that while the rate of subprime foreclosures is alarming today, the worst is still ahead. With as many as 1.7 million foreclosures predicted to occur in the next two to three years,[11] it is imperative that Congress take action to assist homeowners struggling today, not just protect future subprime borrowers.

Even with the recent modest cut in interest rates, many subprime borrowers will face 40 percent or greater increases in their monthly mortgage payments once their initial "teaser" rates expire and their fixed interest rates reset into higher-rate variable rates. As the chart below shows, a large majority of these rate resets will occur in early 2008.[12]



D. TIGHTENING OF CREDIT HAS BEEN CAUSED BY AN INDUSTRY THAT HAS RUN TOO LOOSELY AND WITHOUT SUFFICIENT REGULATION.

The mortgage industry has argued for years that regulation of subprime lending would have the unintended consequence of restricting credit. Today it is apparent that the current tightening of credit has been caused by the lack of adequate regulation and the reckless lending that followed. If subprime lenders had been subject to reasonable rules—the kind of rules that responsible mortgage lenders in the prime market have always followed—it is safe to say we would have avoided the massive problems we are seeing today.

It is possible to structure subprime loans in such a way that homeowners have a high chance of achieving sustainable ownership. Unfortunately, that's not what most subprime lenders have done in recent years. In fact, they have done the opposite. Typical subprime mortgages have been refinances that include adjustable interest rates, prepayment penalties, and little or no documentation of the borrower's income. In the "Losing Ground" study, we examined subprime mortgages made from 1998 through 2003 to assess the relationship between specific loan characteristics and the loan's performance. As shown in the chart below, the typical features on subprime mortgages are strongly linked with higher rates of foreclosure:

% Increase in Foreclosure Risk for Specific Loan Features by Annual Loan Cohort[13]

(Positive numbers indicate higher risk, after controlling for borrower credit scores)

	1998	1999	2000	2001	2002	2003
ARM vs. Fixed-Rate Loan	123.31***	86.03***	72.03***	61.80***	77.85***	117.11***
Balloon vs. Fixed-Rate Amortizing Loan	75.67***	51.77***	36.02***	21.66***	14.08*	85.92***
Loan with Prepayment Penalty vs. Loan with No Prepayment Penalty	70.4***	65.0***	52.4***	35.8***	25.8***	18.7***
Loan with No or Low Documentation vs. Full-Doc Loan	5.57**	19.02***	29.00***	25.75***	44.72***	63.69***
Purchase Money Loan vs. Refinance Loan	19.3***	20.7***	28.5***	37.9***	61.0***	102.0***

Confidence levels: * = 95%, ** = 99%, *** = 99.9%. Detailed results available upon request.

This table shows that, even after controlling for a homeowner's credit score, typical subprime loans increase the chance of loan failures. For example, on adjustable-rate mortgages compared with fixed-rate mortgages, the foreclosure rate was 62–123% higher. Loans with prepayment penalties carried a higher foreclosure risk ranging from 19% to 70%.

Some of these loan characteristics can work fine for homeowners when their lenders have carefully evaluated the loan's risk. For example, adjustable-interest rates are a reasonable option for families that are not already stretched to make their payments or those who expect a future increase in income. But in recent years, the subprime market became dominated by adjustable rate mortgages that allowed families no chance to sustain them: they were set only to go up, could not go down, and had such high margins (6% to 6.5%) over a cost of funds index (LIBOR) that they quickly jumped to highly unaffordable levels (currently 12% plus). Further, typical subprime loans included multiple higher risk features that became even more lethal when packed together in one loan. The 2-28 subprime "exploding ARMs" comprised "nearly 80% of subprime originations in 2006." [14]

For the past decade, subprime lenders have been aggressively marketing these dangerous loans and touting the easy availability of mortgages. Now, because of their actions, the market is tighter for everyone.

E. MARKET FORCES ARE NOT CORRECTING THE SITUATION.

Normal market forces are not correcting the subprime crisis. That's because the subprime mortgage market as currently structured doesn't have adequate incentives to police itself; in fact, subprime lenders continue to have strong incentives to make harmful loans. Consider these facts:

- Mortgage brokers, who make approximately 70% of subprime mortgages, are not required to offer loans that are in the borrowers' best interests.
- Subprime mortgage lenders provide financial incentives (compensation for interest rate bumps, called "yield-spread premiums") to mortgage brokers for putting borrowers in higher interest loans than they deserve. Lenders also provide brokers incentives to include prepayment penalties costing thousands of dollars and carrying significantly higher chances of foreclosure.
- Lenders, until recently, reaped huge profits by ignoring a homeowner's ability to repay the loan and/or neglecting to document the homeowner's income.
- Unscrupulous lenders gain a competitive advantage over honest lenders when they exclude the costs of taxes and insurance from monthly mortgage payments.
- Lenders make more money when they steer people into subprime loans—even when those people are qualified for a lower-cost prime loan.
- Since loans typically pass from brokers to lenders to investors, it has been easy to avoid accountability for abusive mortgages.

All of these market incentives point in one direction: If the subprime market continues running without any rules, borrowers will continue to receive abusive loans that lead to foreclosure. The market may tighten up temporarily, but with these perverse incentives firmly in place, future abuses are inevitable.

We support responsible subprime lending, in fact, we've done it since 1985, but we are opposed to the reckless way that subprime lending has been conducted in recent years. When subprime mortgages are made with care, they are a valuable tool for giving families a secure foothold in the middle class. Sustainable homeownership is one of the best options for helping struggling families. But offering a false promise of homeownership is like serving tainted water. If we care about sustainable homeownership, and if we want good credit to be more abundant in the future, then we need to require lenders to return to common-sense loan assessments.

F. THE IMPACT ON HOMEOWNERS IS DEVASTATING.

The subprime meltdown has affected markets around the world, but the markets are likely to recover faster and more completely than families who lose their homes to foreclosure. Consider the case of the McGowan family in Gastonia, North Carolina, who recently lost their home to foreclosure in spite of all their best efforts to make payments on a loan they never should have received. Butch McGowan worked as a fire fighter for many years and his wife, Cynthia, was a police dispatcher. They have two children, including a daughter who has had multiple brain surgeries. They have no credit card debt, but because of their health issues, they have carried debts related to medical expenses.

The McGowan family desperately wanted a home of their own, and in 2006, they were very excited when they were told they qualified for financing. When they went to close on the loan, they were expecting to receive a fixed-rate mortgage with an interest rate of 6.75%. Instead, the lender rushed in late and said, "9.75% is the

best we can do. Oh, and by the way, the rate will go up even higher in six months—but don't worry you can refinance."

"You can refinance" became the refrain of subprime lenders during the lending frenzy we have experienced during the past few years. Homeowners were told not to worry about loans that would have unaffordable increases in interest rates because "you can refinance." Lenders continued to say this even when concerns about an overheated housing market were pervasive and even when it was doubtful that borrowers would have enough equity to support a refinance. Subprime lenders didn't have anything to lose. If they could refinance the borrower, they made more money. If a refinance wasn't possible—which is often the case when prices flatten or drop—well, it was unfortunate, but it didn't really affect the lender, since they had long ago sold the loan to Wall Street. These practices eventually caught up with virtually all stand-alone subprime lenders over the past several months, but that is small consolation to the McGowans and millions more like them.

To make matters worse for the McGowans, they were told their mortgage payment included property taxes and hazard insurance, but it did not. Even knowing that the McGowans were on a limited, fixed income, the lender failed to escrow for costs the family would be required to pay. The McGowans closed on their mortgage thinking they could somehow find a way to manage a loan at 9.75% until the promised refinance came through. But adding taxes and insurance on top of an expensive loan tipped them over the edge, and even though Mr. and Mrs. McGowan tried their best, they simply couldn't make the payments. The McGowans have used up all their retirement funds, and they are never sure from one week to the next they will have enough money for groceries.

Mrs. McGowan sums up the situation when she says this: "The only thing I wanted to do is to try to fix something for my children to have after we are gone. And now that we've used all of our 401Ks and 457s, there is not much left if we can't hold on to something." [15]

IV. Policy Recommendations—Discussion

It is not too late to help families such as the McGowans, and also to prevent abusive subprime mortgages in the future. Both the Federal Reserve Board and Congress have authority to make lenders accountable for reckless lending that harms homeowners, businesses, and investors. As described earlier, the market is structured in a way that encourages brokers and lenders to ignore the quality of mortgage loans and their likelihood of success. These perverse incentives call for reasonable, common-sense interventions.

Our policy recommendations focus on two major areas. First, we need strong predatory lending protections to help homeowners in the future. These items, listed in our summary, include a number of measures that have already been incorporated into state laws and/or guidance issued by regulators.

Second, we need to employ sensible strategies to minimize the devastation caused by bad loans that have already been made by helping families avoid foreclosure. In recent weeks, some have tried to frame sensible solutions as a "borrower bail-out." This is absurd. First, any effective measures for addressing the foreclosure crisis will not only help homeowners, they will help entire communities and the nation's economy as a whole. Second, no one is proposing to remove all debt obligations from homeowners—families will still need to make timely mortgage payments. We and other concerned groups are proposing policy solutions that center on these actions:

We discuss these recommendations in more detail in the following sections.

A. Avoiding Tomorrow's Crisis: Preventing Future Foreclosure Epidemics and Associated Losses.

Today's crisis in the subprime market was driven by three core market failures. First, the subprime industry forgot the fundamentals of its own business-it failed to underwrite the loans, and failed to assess whether there was an ability to pay the loan. Second, this market lacked competition in the traditional sense. Rather, there were perverse incentives to compete for the business of the middlemen, and for the middlemen to deliver to investors higher-priced and more dangerous products. Finally, the subprime mortgage market lost accountability. Both legal accountability and the accountability resulting from market discipline disappeared into a vacuum created by lack of regulation and securitization. Here we propose reforms that would address each of these issues.

To restore common sense underwriting and assure ability to pay:

- Require lenders to determine that the borrower has the ability to repay the loan at the fully indexed rate, assuming fully amortizing payments. The payment shock

associated with adjustable rate or non-fully amortizing loans must be taken into account.

At a minimum, underwriting on adjustable rate mortgages must assess ability to pay on a fully-indexed interest rate, assuming fully amortizing payments.[16] Common public understanding of the mortgage system assumes that lenders underwrite loans and would not make loans to borrowers who do not have the ability to repay them. In the face of an increasingly complicated market and complex products, this reliance on the expertise of the originator and underwriter is not only understandable, it is important for the efficiency and credibility of the industry. This is the case whether the loan is originated by the lender or by a broker.

Federal banking regulators issued strong guidance requiring depositories and their affiliates to underwrite loans at the fully indexed interest rate to ensure that borrowers will be able to repay their mortgages. We need a clear standard in place that applies that same concept to the *whole* subprime market. Congress should provide a clear guideline for lenders by setting a rebuttable presumption that a debt-to-income ratio (encompassing a family's housing expenses and all other monthly obligations) of 50% or higher is unaffordable. Without a debt-to-income ratio presumption, lenders can simply increase their debt-to-income ratio lending standards commensurately to underwriting to the fully indexed rate, to a clearly unaffordable level, and then argue that they met the fully indexed standard.[17]

Legislation requiring the determination of a borrower's ability to repay should be based on these principles:

(1) Lenders must consider an applicant's ability to repay the loan according to its terms and based on a fully-amortizing repayment schedule.

(2) The debt-to-income ratio must include all debt payments, including total monthly housing-related payments such as principal, interest, taxes, and insurance, and both first and subordinate liens.

(3) Lenders can, on a case-by-case basis, rebut the debt-to-income presumption by showing that the consumer has other verified resources for making loan payments, and/or that there is a specific basis for lowering the consumer's expenses, and that there are adequate resources available to cover family living expenses after deducting debt service requirements from monthly income. When underwriting its home loans, the Veterans Administration uses a similar approach that allows lenders to consider a number of factors to justify decisions that would normally fall outside established guidelines.[18]

• Require lenders to verify borrower income using tax documents, payroll or bank records, or other reasonable documentation.

Most people can readily document their income using W-2s, 1099s or tax returns, but there are strong incentives for all parties involved to avoid documentation and inflate a loan applicant's income: Borrowers are able to qualify for bigger loans;[19] brokers receive higher yield-spread premiums for pushing the higher interest rates that comes with stated income mortgages and by not having to do the work to verify incomes;[20] and lenders and brokers both collect hefty fees with each later refinancing of these unaffordable loans.[21] Inadequate documentation compromises a lender's ability to assess the true affordability of a loan and makes any reported debt-to-income ratio meaningless. For the small minority of people who can't use standard documentation, lenders should require bank records or other reasonable verification.

• Require lenders to escrow for real estate taxes and property insurance.

Failing to escrow for taxes and insurance on a subprime loan is an unfair and deceptive practice that contributes to high rates of foreclosure.[22] Requiring such escrows is the norm in the prime market[23] and is rare in subprime.[24] This has distorted the subprime market by making it difficult for responsible lenders to compete. By creating artificially low monthly payment figures, the failure to escrow deceives consumers about the actual cost of these mortgages relative to those offered by competitors that do escrow. Consumers are frequently lured into higher cost or unaffordable loans by misleading comparisons of lower payments that exclude taxes and insurance with payments that include those costs.[25] Non-escrowing lenders have benefited financially from the deception.

To correct distorted pricing incentives and encourage a truly competitive marketplace:

• Ban prepayment penalties and yield-spread premiums on subprime loans.

Prepayment penalties—the "exit tax" for refinancing or otherwise paying off a loan-are a destructive feature of the subprime market that lock borrowers in to high-cost loans, and make it difficult for responsible lenders to refinance them into

lower-cost loans. Today prepayment penalties are imposed on about 70 percent of all subprime loans,[26] compared to about 2% of prime loans.[27] This disparity belies any notion that subprime borrowers freely "choose" prepayment penalties. All things being equal, a borrower in a higher-cost loan, or in an unpredictable, adjustable rate loan with a very high margin, would not choose to be inextricably tied to that product by a high exit tax.[28] With common formulations of six months' interest, or amounts of approximately 3% of the principal, the amount of equity lost is significant. For a $200,000 loan, a 3% prepayment penalty costs borrowers $6,000, eating almost entirely the median net worth for African American households.[29]

It has long been recognized that prepayment penalties trap borrowers in disadvantageous, higher cost loans. Indeed, this is the penalty's purpose—in industry parlance, to "build a fence around the borrower" or "close the back door." Less well known is the fact that these penalties also increase the cost of the loan at origination because they are linked to higher rates on loans that pay higher so-called "yield-spread premiums" to brokers.[30] Thus, contrary to the claims of some lenders, prepayment penalties do not decrease, but, rather, frequently increase the cost of subprime loans.

Yield-spread premiums are a bonus paid by the lender to the mortgage broker as a reward for placing the borrower into a higher cost loan than the borrower qualifies for. Lenders are willing to pay the premium only where they are sure that the borrower will remain in the higher-cost loan long enough to enable the lender to recoup the cost of the premium from the borrower. This is not a theoretical concept; the evidence is clear from examining "rate sheets," information lenders distribute to mortgage brokers showing which loan products the lender is willing to offer at different interest rate levels for borrowers that represent different credit risks. These sheets also indicate the yield-spread premium the lender is willing to pay.

We provide an example of a recent rate sheet (September 2007) in the appendix. As you can see, the rate sheet shows that the broker collects a 50 basis point (0.50%) yield spread premium (called a "rebate" on this rate sheet) for adding 1% to the borrower's interest rate. The broker collects an additional 75 basis point yield-spread premium for adding an additional 1% to the borrower's interest rate. Thus, with a $200,000 subprime loan, for the broker to receive a 2% yield-spread premium, or $4,000, the borrower pays 1.25% more than she actually qualified for, or $10,000 in excess interest expense if he or she stays in the loan for four years. The broker maximizes his compensation by seeking the lender and the loan that allow for the maximum return to him.

It is important to note that this lender reduces the yield-spread premium if the borrower pays a higher interest rate to "buy out" the prepayment penalty—in many cases lenders do not allow the broker to get any yield-spread premium if the loan has no prepayment penalty. Yield-spread premiums and prepayment penalties are intertwined in a way that is harmful to consumers and detrimental to competition (for a fuller discussion of these issues, please refer to our recent comment letter to the Federal Reserve Board, submitted on August 15).[31]

Thus, the yield-spread premium puts the broker in a direct conflict of interest with the client borrower. Yield-spread premiums and prepayment penalties both substantially undercut the benefits of homeownership by stripping equity from the borrower. Prepayment penalties lock the borrower into a higher-cost loan, strip further equity upon refinance, and have been documented to increase the borrower's vulnerability to foreclosure.

• Eliminate steering homeowners into unnecessarily expensive loans.

The subprime market has long cited "riskier borrowers" or "credit-impaired borrowers" as its justification for the higher prices on these loans. The argument is that investors need the higher prices to justify their risk, yet that extra price burden for the subprime loan puts credit-strapped borrowers that much closer to the edge.

That is one reason why, as we can now see, it serves the interest not only of homeowners, but of the world economy, to assure that all families seeking loans who qualify for lower cost prime mortgages should receive a prime mortgage, not a subprime loan. We know that far more people have been placed in high-cost loans than should have been.[32] Since it is now abundantly clear that "risky loans," as much or more than "risky borrowers," are a threat, market professionals—loan originators, whether brokers or retail lenders—should be required to assure that borrowers are put into the rate they qualify for. Market incentives that encourage originators to put as many people as possible into the priciest (and most dangerous) loans possible helped make this problem; prohibiting those incentives is a necessary part of the solution.

Eliminating the practice of steering borrowers to pricier and riskier loans is also critical to assuring a fair marketplace that does not impose a discrimination tax on

borrowers of color. We know that for borrowers of color, the odds of receiving a higher-cost loan are greater, even after controlling for legitimate risk factors.[33] We are long past the time when we can—or should—close our eyes to this.

Finally, to restore accountability to the process, we recommend:

• Hold lenders responsible for abusive lending practices, regardless of whether the loan was originated by the lender or mortgage brokers.

As the market operates today, lenders can benefit from abusive loans made by brokers without any adverse consequences. We believe the subprime market will remain a dangerous place for families until lenders are responsible for abusive subprime loans, regardless of whether they originated the loan directly, or whether they acquired the loan through a broker. The lack of accountability for lenders leaves homeowners without adequate remedies. Brokers are commonly thinly capitalized and transitory, leaving no assets for the borrower to recover against. Unclear lender liability means that homeowners face nearly insurmountable legal hurdles in trying to defend their home against foreclosures caused by broker lending abuses.

Lenders, who are mortgage professionals themselves, as well as repeat users of brokers' services, have the expertise, the leverage and the capacity to exercise oversight of the brokers with whom they do business. Consumers do not. Indeed, the agencies have acknowledged that lenders must engage in just such oversight. The costs of their failure to do so should therefore be borne by lenders, not borrowers.

• Hold mortgage brokers accountable for abusive lending practices.

Nor should mortgage brokers be allowed to shirk responsibility for their actions. The broker has specialized market knowledge that the borrower lacks and relies on. And brokers hold themselves out to borrowers as a trusted adviser for navigating the complex mortgage market; why otherwise would a person engage and pay for one? Merely licensing mortgage brokers is insufficient—brokers must have affirmative duties to their customers to turn the tide of abusive lending practices. We commend Senators Schumer, Brown and Casey for introducing the Borrower's Protection Act of 2007, which offers key protections that would help hold brokers accountable for abusive practices including establishing a fiduciary duty between brokers and their customers, and a duty of good faith and fair dealing standard for all originators. An additional route for Congress would be to dramatically increase the bonding requirements for mortgage brokers.

• Hold investors accountable for the loans they support through assignee liability.

Assignee liability permits homeowners to pursue legal claims against the assignee (the party that has purchased or otherwise taken an interest in the loan) when the loan transaction involves illegal actions or abusive terms. Without it, borrowers are often left without recourse for predatory lending abuses, while retaining the risk of losing their home to the current holder of the predatory note. Since three-quarters of subprime home loans are sold on the secondary market,[34] assignee liability is a critical component of any meaningful market reforms.[35]

All parties that benefit from subprime mortgages should be held accountable. Without legal liability for assignees, a family that has been the victim of a predatory loan cannot stop the foreclosure of their home even if the originator is solvent and well-capitalized. Instead, they end up losing their home, and then they must bring a separate action against the originator. This separate action can take years.

Assignee liability also protects the integrity of the market, providing incentives to police itself, thus curbing inefficiencies. By assuring assignee liability, the law helps to protect responsible investors from misperceived risks and provides incentives for the market to police itself, curbing market inefficiencies. No one is more effective than investors who face financial and legal risk in ensuring that loans are originated to specified standards. It cannot be stressed too much that freeing investors from liability for the mortgages they purchased contributed to the disregard of lending standards that brought about the current crisis.

For example, shielding assignees from liability leads directly to a situation where loans without documented income become more desirable to investors than appropriately documented loans. Investors' willingness to pay more for "no doc" loans led loan originators to encourage borrowers to accept such loans rather than appropriately document their income. As the chief executive officer of the now bankrupt Ownit Mortgage Solutions explained when he acknowledged the lowering of underwriting standards, "'The market is paying me to do a no-income-verification loan more than it is paying me to do the full documentation loans,'" he said. 'What would you do?'"[36] The reason investors were happy to pay more for riskier loans was that they were shielded from liability for the consequences. Restoring appropriate assignee liability would help ensure that when investors accept mortgages, with all

the corresponding financial benefits, that they also accept the corresponding responsibility.[37]

• Buttress, but do not impede, the states' efforts to prevent predatory lending.

It is imperative that the federal standards set the floor, not the ceiling, on lender conduct. It is a common refrain that we have a "national mortgage market" so we need national standards. But we do not have a national mortgage market. We have a national market—indeed, we have an international market—in pieces of paper traded around the world. But somewhere down at the bottom of many tiers of "structured finance," that paper is someone's home. And there is nothing more local than a home and the neighborhood in which that home is located.

Different parts of the country were subjected to different aspects of the predatory lending problem at different times. In the regions where property values were ballooning, inflated appraisals were not a problem; in regions where property values were stagnant, inflated appraisals were a pervasive and serious part of the problem. Purchase loans with low down payments or high LTV refinances were not as serious a threat in areas where the property values were on a steeply upward slope, since a struggling homeowner could refinance or sell. But in areas where property values were stagnant, or appreciating only marginally, the "foreclosure crisis"—and the loans that caused them—is old news.

States are more nimble and more able to accurately target specific problems than federal policymakers and the states have served as valuable laboratories of democracy to inform Congress' decisions. The last time Congress addressed the predatory lending problem was 1994. The states have been addressing the issues as they arise, all along.[38] Imagine how much worse the present crisis would be if many of the states had not acted in the meantime, and how less well informed Congress would be of what solutions to offer if the states hadn't been implementing them. Ohio should not have to wait to respond to its crisis until California starts feeling it. Congress should not hamstring the ability of the states, the true "local cops on the beat," to respond to the calls of distress in their communities.

B. MITIGATING THE CONSEQUENCES OF TODAY'S CRISIS: RECOMMENDATIONS TO HELP CURRENT HOMEOWNERS

• Direct servicers and lenders to make meaningful and sustainable modifications to existing loans.

The best and most effective help for homeowners placed into loans they cannot afford is for the lender or servicer to modify the loan terms to make them sustainable. This is hardly a give-away, since even lending industry leaders have acknowledged that many of these borrowers qualified for sustainable, 30-year fixed rate subprime mortgages, typically at a cost of only 50 to 80 basis points above the introductory rate on the unsustainable exploding ARM they were provided.[39] In fact, a review of a broad array of lender rate sheets establishes that those borrowers who were given "no doc" loans notwithstanding their ability to document their income could have received 30-year fixed rate fully documented loans *at a lower rate* than the no-doc 2/28 adjustable-rate mortgages they received.[40] And this does not include the 20% or so of subprime borrowers who qualified for conventional loans from the beginning.[41]

In our estimation, 20% of existing homeowners—those who were able to repay their loans before their rates reset but could not refinance to conventional loans—could save their homes if their current "teaser" interest rate was fixed at that rate. For another 20% of borrowers—those unable even to pay the teaser rate because they were placed into stated income loans they couldn't afford, or the cost of taxes and insurance had not been factored in, for example—reducing the principal balance or interest rate up to 50% would make it possible to afford the lowered payments on the reduced loan balance, refinance the loan, or sell.

We believe that, at a minimum, servicers should do such a modification whenever the borrowers' debt-to-income ratio, including other debts and including escrows, exceeds 50% upon reset. Reducing the interest rate or principal by half would provide the lender with the likely value they would obtain through foreclosure, including foreclosure expenses. Moreover, replacing anticipated foreclosures with modifications would avoid the rash of foreclosures that would produce further home price declines.[42]

Some lenders have reported to policymakers that they are currently offering loan modifications to troubled borrowers. The housing counselors, community groups and consumer lawyers we hear from tell us that in the vast majority of cases this is not so.[43] We also are hearing that in the minority of cases where modifications are offered, they are limited to a one-year or even a six-month extension of the introductory interest rate, a modification that is too short-term and unsustainable to allow

a family to engage in meaningful planning for their financing, housing and children's schooling. Sustainable, meaningful loan modifications would ideally last for the life of the loan but certainly no shorter than five years.

A related and critical concern is that different borrowers will be treated differently (for example, those who cannot afford legal representation may be at a distinct disadvantage and may not be offered the same, or any, options). One need is to standardize the loan modification process to ensure fairness and efficiency.

Finally, when approximately two million households face the threat of foreclosure, any case-by-case resolution will be inadequate. Congress has the power to authorize a number of effective actions to support sustainable homeownership and should take the following steps to maximize the number of borrowers who receive help:

Loss Mitigation: The federal regulators have issued a call to lenders and servicers to engage in loss mitigation efforts prior to pursuing foreclosure. But more concrete steps are needed. To adequately stem the tide of foreclosures Congress should act to require specific loss mitigation efforts prior to any foreclosure filing and establish that failure to provide such loss mitigation can be used as an affirmative defense against foreclosure. Legislation such as Senator Reed's Homeownership Protection and Enhancement Act (S.1386) is a step in the right direction as it would make important inroads on foreclosure prevention by creating an affirmative duty for lenders and servicers to engage in some loss mitigation efforts prior to foreclosure.

Counseling and Legal Assistance: Congress can also play a vital role in helping homeowners navigate the complicated process as they work to keep their homes. For example, Congress should provide additional funding for qualified and trained counselors and legal advocates, and lift the restraints on legal services-funded programs from collecting attorneys' fees when defending foreclosures. There is also an urgent need to fund for housing counselors and lawyers for low-income homeowners to help them negotiate work-outs with lenders and navigate tax and bankruptcy issues.

Data: To assist policymakers, industry and consumer groups in devising meaningful policy alternatives, more data is urgently needed. Congress should require servicers to report to a central database each time a modification is offered, describing the nature of the modification and how long it is effective. Servicers also should report when lenders pursue foreclosure or collection litigation without first offering a loan modification to the homeowner. Knowing how often servicers modify loans, and what these modifications consist of, is at least as important as knowing origination data reported by HMDA.

FHA support: Another important step is increasing the Federal Housing Administration's capacity to insure abusive subprime mortgages that can be refinanced. The President's proposals for the FHA provide a helpful starting point, but we shouldn't be under any illusions that they alone will substantially address problem.

However, even if we take these steps to encourage loan modifications, the epidemic of subprime foreclosures is much too massive to be handled by these mechanisms alone. To further mitigate the damage caused by unsustainable subprime mortgages, we strongly recommend two further legislative solutions—one to correct an anomaly in the Bankruptcy Code, and another to correct an anomaly in the Internal Revenue Code.

• Most importantly, eliminate an anomaly in the Bankruptcy Code, which currently allows judges to modify mortgages on a borrower's vacation home or investment property, but not on the homeowner's primary residence.

Bankruptcy has served as a safety net in the past for borrowers as an option of last resort, but for struggling homeowners, it has become a serious obstacle to recovering from foreclosures. The problem is that Chapter 13 of the Bankruptcy Code—the Chapter that applies to consumer bankruptcy reorganizations where borrowers go on a payment plan—makes the home mortgage virtually the only debt that the court cannot modify and therefore the home the only asset it cannot protect.[44] Since a home is typically the largest and most important asset a family has, and the home mortgage loan is the family's largest single debt, the exclusion of the principal residence from modification prevents bankruptcy protection from reaching where it is needed most. Bankruptcy is a critical tool to help homeowners, it is an efficient mechanism and is, from a government perspective, a solution that does not require direct appropriations.

The current bankruptcy language dates back to 1978. It was indefensible policy then; a family's personal residence should be their most protected asset in bankruptcy, not the least. This provision is particularly harmful today, however, as exploding ARMs are the single most important factor causing financial crisis for millions. In fact, hundreds of thousands of families face rate resets at the same time that their houses are worth less than the balance on their mortgage. Thus, they cannot sell their house or refinance their loan. Some will receive loan modifications

from their servicers, but for a number of reasons, most will not. Unless Congress passes the Act, these families will lose their homes.

Eliminating this anomaly would not require Congress to revisit the 2005 amendments to the bankruptcy code. In fact, those amendments were intended to encourage debtors to file under Chapter 13. But as currently drafted, Chapter 13 has rendered Bankruptcy Courts powerless to provide relief at a time when it is so urgently needed.

Not only is current bankruptcy policy unwise; it is unjust. Because the home mortgage exception applies only to primary residences, borrowers wealthy enough to own two homes can obtain relief from the mortgage on their vacation or investment home, thereby retaining at least one shelter for their family. Nor does the exception apply to the homes of family farmers, who file under Chapter 12, or to commercial real estate owned by businesses filing under Chapter 11.[45] The law thus deprives mostly low-wealth and middle class families of protections available to all other debtors. If the borrowers cannot restructure these debts, then they can neither save their home nor get back on their feet financially.

The crux of the problem is found in section 1322 of the Bankruptcy Code, which should be revised, very simply, as follows:

1322 Contents of plan

. . . .

(b) Subject to subsections (a) and (c) of this section, the plan may –

(2) modify the rights of holders of secured claims, ~~other than a claim secured only by a security interest in real property that is the debtor's principal residence,~~ or of holders of unsecured claims, or leave unaffected the rights of holders of any class of claims;

A narrowly-tailored amendment to the Bankruptcy Code soon to be introduced by Senator Durbin, and under consideration by other members, would correct this anomaly in a measured way that would provide urgently needed relief. It could help more than 600,000 of these financially-troubled families keep their homes[46] by giving bankruptcy judges the authority to modify these mortgages in Chapter 13. In addition, it would save American families not facing foreclosure $72.5 billion in wealth by avoiding 600,000 foreclosures by their neighbors.[47] Finally, it would still guarantee lenders at least the value they would obtain through foreclosure, since a foreclosure sale can only recover the market value of the home. In addition, it would save lenders the high cost and significant delays of foreclosure.

• Eliminate an anomaly in the Internal Revenue Code, which does not tax homeowners on the first $500,000 (for couples) they earn when they sell their home at a gain, but *does* tax homeowners when the lender declines to sue them for any balance due when the home is sold at a *loss*.

Consistent with the long-standing American policy of encouraging home ownership, the Internal Revenue Code provides a generous tax break—even beyond the well-known mortgage interest deduction—for homeowners fortunate enough to sell their homes at a price in excess of what they paid. Each taxpayer can write off—that is, they are excused from paying taxes on—$250,000 worth of profits they make on the sale of their home. Couples get to write off $500,000 in profits.

However, while the law is extremely generous with families that *make* money on their homes, it is remarkably ungenerous with those that lose. Under current law, where a homeowner owes the bank more than the home is worth, and is in sufficient financial trouble that the bank relinquishes its claim for the excess balance over the home's value, the federal government taxes the homeowner on this excess. This is so even where the borrower loses the home in foreclosure.[48]

Given a policy that provides homeowners with a tax exemption for up to *a half-million dollars* in homeownership-related *gains*, it is deeply unjust to refuse a comparable exemption for families facing homeownership *losses*. A recent proposal by President Bush and bills introduced by Representative Andrews and Senator Stabenow partially address the problem. To impact more than a minority of financially troubled homeowners, the bills should also be revised to cover loan balances incurred through so called "cash-out refinancings"—refinancings encouraged by government officials. Most subprime loans over the last several years were cash-out refinancings, cash which often went to pay high broker and lender fees.[49] Additionally, the bills need to be revised to ensure that they relate not only to tax forgive-

ness upon the sale of the home, but also tax forgiveness through modifications that enable the homeowner to keep the home.

CONCLUSION

Not so long ago, the best interests of financial institutions and homeowners were aligned. When a home foreclosed, it was a loss not only to the family who lived in the home, but also to the lender who had provided and held onto the loan. Today in the subprime market we have a disconnect between these interests, and that needs to change. To restore the world's confidence in our markets and recover a reasonable expectation of integrity to our mortgage financing system, we need decisive policy actions to realign the interests of people who buy homes, institutions that provide the loans and the entities that invest in those mortgages. As long as subprime lenders have little or no incentive to make a loan successful, we will continue to set families back financially, and rather than building our nation's prosperity through homeownership, we will continue to lose economic ground.

The subprime lending system has failed millions of middle-class families. These are people who were trying to do everything right: they worked hard at their jobs, they took care of their children, and they were seeking a more secure future. Now these families are on the verge of losing any semblance of security, and we all will be worse off as a result. The losses in wealth to neighbors, through the negative impact of foreclosures on property values, is even larger.

As outlined here, policymakers have a number of tools at their disposal to mitigate the harm caused by this situation and prevent it from happening again in the future. We strongly urge you to take our recommended actions to protect homeowners and promote sustainable homeownership.

End Notes

[1] Ellen Schloemer, Wei Li, Keith Ernst, and Kathleen Keest, *Losing Ground: Foreclosures in the Subprime Market and Their Cost to Homeowners*, (December 2006) at http://www.responsiblelending.org/issues/mortgage/reports/page.jsp?itemID=31214551.

[2] Christopher L. Cagan, *Mortgage Payment Reset: The Issue and the Impact, First American CoreLogic* (March 19, 2007), available at http://www.facorelogic.com/uploadedFiles/Newsroom/Studies__and__Briefs/Studies/20070048Mortgage PaymentResetStudy__FINAL.pdf

[3] Mortgage Finance Industry Overview, Lehman Brothers Equity Research (December 22, 2006).

[4] Robert B. Avery, Kenneth P. Brevoort and Glenn B. Canner, "The 2006 HMDA Data," Federal Reserve Board (September 12, 2007), available at http://www.federalreserve.gov/pubs/bulletin/2007/pdf/hmda06draft.pdf.

[5] Moody's Economy.com, "Into the Woods: Mortgage Credit Quality, Its Prospects, and Implications," a study incorporating unique data from Equifax and Moody's Investors Service (2007).

[6] We are unable to verify the extent of this problem because the MBA is using proprietary data to make this claim.

[7] Mortgage Bankers Association Press Release "Investor Loans Major Part of Defaults in States with Fastest Rising Deliquencies" 8/30/2007, at http://www.mbaa.org/NewsandMedia/PressCenter/56535.htm

[8] For example, Genworth Mortgage Insurance's "A-Minus Rate Sheet" dated December 1, 2005 shows a 0.5% premium for investor loans added to a base rate of 1.66% annually for coverage on a 90% LTV A-minus loan with a credit score of 600-619.

[9] See, e.g., Nicola Clark, "Bank in Germany Posts Loss Because of Bad Stock Trades," *New York Times* (August 31, 2007); Jenny Anderson and Heather Timmons, "Why a U.S. Suprime Mortgage Crisis is Felt Across the World," *New York Times* (August 31, 2007). Indeed, the globalization of the consequences have left people on other continents asking for an international oversight role: "Why should the rules of lending in the U.S. be left to U.S. regulators when the consequences go everywhere?" Heather Timmons and Katrin Bennhold, "Calls Grow for Foreigners to Have a Say in U.S. Market Rules," *New York Times* C1, (August 29, 2007).

[10] Also available at http://www.bloomberg.com/apps/news?pid=20601206&sid=aQBUrPcefMtc&refer=realestate and http://online.wsj.com/public/resources/documents/info-BondTurmoil0707-sort.html

[11] Into the Woods, note 5.

[12] Source: Bank of America analyst, cited by Orange County Register http://blogs.ocregister.com/mortgage/archives/2007/06/bofa__analyst__mortgage__correcti__1.html

[13] Losing Ground, note 1 at page 21.

[14] Credit Suisse, *Mortgage Liquidity du Jour: Underestimated No More*, (March 12, 2007) p. 6.

[15] Quoted in a taped interview with the Center for Responsible Lending, August 2007. See also Jonathan B. Cox, "Groups: Stop Seizing Homes—Foreclosures rising across Wake, US," Raleigh *News & Observer* (June 20, 2007).

[16] In a rising interest rate environment, such as we saw between 2004 and 2006, even using a fully-indexed rate is likely to understate the risk. For that reason, some have suggested more stringent underwriting tests, such as the fully indexed rate plus 1%, see, e.g. AARP Comments to the Federal Reserve Board on Home Ownership and Equity Protection Act, Dkt OP-1288 (8/15/07) p. 11 available at http://www.federalreserve.gov/SECRS/2007/August/20070816/OP-1288/OP-1288_51_1.pdf, AARP makes the strong argument that lenders should underwrite the loan at the fully indexed rate plus 1%, to provide a small cushion against interest rate increases; this would be particularly important when short term rates are abnormally loan and future increases could be expected. Other suggestions to address the rising rate environment conundrum include using as the benchmark the maximum rate to which the loan rate may rise during a specific period, see, e.g. Comments of the National Consumer Law Center and the National Association of Consumer Advocates to the Federal Reserve Board Regarding the Board's Authority to Prohibit Unfair Acts and Practices In Connection With Mortgage Lending Under HOEPA (8/15/07), available at http://www.federalreserve.gov/SECRS/2007/August/20070816/OP-1288/OP-1288_52_1.pdf. Particularly in view of the unfortunate fact that subprime borrowers were never "buying" the opportunity to take advantage of a falling rate environment with their ARMs, because subprime ARMs were "up-escalator only" ARMS, it would not be unfair to offer an extra cushion to protect against rising rate index exacerbating the payment shock.

[17] The maximum debt-to-income ratio set by the Federal Housing Administration for FHA loans is 41%. *See* http://www.fha-home-loans.com/debt_ratios_fha_loans.htm. Fannie Mae has guidelines that describe how the debt-to-income ratio should be calculated. Fannie Mae Selling Guide, Chapter 7, X, 703: Benchmark Ratios (Jan. 31, 2006).

[18] "It should also be clearly understood from this information that no single factor is a final determinant in any applicant's qualification for a VA-guaranteed loan. Once the residual income has been established, other important factors must be examined. One such consideration is the amount being paid currently for rental or housing expenses. If the proposed shelter expense is materially in excess of what is currently being paid, the case may require closer scrutiny. In such cases, consideration should be given to the ability of the borrower and spouse to accumulate liquid assets, such as cash and bonds, and to the amount of debts incurred while paying a lesser amount for shelter. . . . [I]t is important to remember that the figures provided below for residual income are to be used as a guide and should be used in conjunction with the steps outlined in paragraphs (c) through (j) of this section." 38 CFR 36.4337.

[19] However, in many cases, borrowers are unaware that the broker or originator has inflated the income, often after the borrower provided the documentation, such as W-2 forms, according to attorneys and governmental investigators who have worked on such cases. The adjective in the frequently used term "liar's loans," then, should not be thought to apply just to the applicant.

[20] *See, e.g.*, Testimony of Ms. Delores King, Senate Banking Committee Hearing on "Preserving the American Dream: Predatory Lending Practices and Home Foreclosures" (February 7, 2007), available at http://banking.senate.gov/_files/king.pdf.

[21] John C. Dugan, Comptroller of the Currency, *"Remarks Before the Neighborhood Housing Services of New York,"* (May 23, 2007) at 4-5, available at: http://www.occ.treas.gov/ftp/release/2007-48a.pdf. [hereafter "Dugan"] Dugan at 4-5.

[22] *See* "Losing Ground," *supra* note at 27.

[23] *See, e.g.*, Fannie Mae "Single Family Selling Guide" Part VII, Section 104.05 ("First mortgages generally must provide for the deposit of escrow funds to pay as they come due taxes, ground rents, premiums for borrower-purchased mortgage insurance (if applicable), and premiums for hazard insurance and flood insurance. . . . The lender may waive the escrow deposit account requirement for an individual first mortgage, as long as the standard escrow provision remains in the mortgage documents—however, we do not recommend waiving it for a borrower who has a blemished credit record because the borrower may find it difficult to maintain homeownership if faced with the need to make lump-sum payments for taxes and/or insurance and any other periodic payment items.")

[24] *See, e.g.*, "B&C Escrow Rate Called Low," *Mortgage Servicing News Bulletin* (February 23, 2005), "Servicers of subprime mortgage loans face a perplexing conundrum: only about a quarter of the loans include escrow accounts to ensure payment of insurance premiums and property taxes, yet subprime borrowers are the least likely to save money to make such payments."

[25] *See, e.g.* States' settlement agreement with Ameriquest, IV-B-5, http://www.state.ia.us/government/ag/images/pdfs/ Ameriquest_SETTLMNT_FINAL.pdf; State of Iowa v. Household International, *Consent Judgment* Para. 9(E)(1), *available at* http://www.state.ia.us/government/ag/latest—news/releases/dec—2002/hhconsent.pdf; Federal Trade Commission vs. Citigroup, et al. Civ. No 1:01-CV-00606 (E.D. Ga., filed), Complaint, Para. 18-19, http://www.ftc.gov/os/2001/03/citigroupcmp.pdf.

[26] *See, e.g*. David W. Berson, *Challenges and Emerging Risks in the Home Mortgage Business: Characteristics of Loans Backing Private Label Subprime ABS*, Presentation at the National Housing Forum, Office of Thrift Supervision (December 11, 2006). According to MBA data, there was a 69.2% penetration rate for prepayment penalties on subprime ARMs originated in 2006. Doug Duncan, *Sources and Implications of the Subprime Meltdown*, Manufactured Housing Institute, (July 13, 2007). A recent CRL review of 2007 securitizations showed a penetration rate for prepayment penalties averaging over 70%.

[27] *See* Berson, *id*. A recent MBA analysis shows that 97.6% of prime ARMs originated in 2006 had no prepayment penalty, and 99% of 2006 prime FRM had no penalty. Doug Duncan, *id*.

[28] Marketing jargon in the industry is more honest about the role of prepayment penalties, along with high-LTV loans: "Build a fence around the customer:" or bring them in and "close the back door" are phrases that surfaced during regulatory investigations of subprime lenders in which one of the authors of this Comment was involved.

[29] Indeed, according to one study, it would exceed the median net worth in 2002 for African American households ($5,988). And it drains almost 7% of the median net worth for white households that year ($88,651). Rakesh Kochhar, *The Wealth of Hispanic Household: 1996–2002* p. 5, (Pew Center for Hispanic Studies), http://pewhispanic.org/files/reports/34.pdf

[30] Christopher A. Richardson and Keith S. Ernst, *Borrowers Gain No Interest Rate Benefits from Prepayment Penalties on Subprime Mortgages,* Center for Responsible Lending (January 2005).

[31] Comment letter from the Center for Responsible Lending to the Board of Governors of the Federal Reserve Board (August 15, 2007), available at http://www.responsiblelending.org/policy/regulators/page.jsp?itemID=33824187.

[32] Mike Hudson and E. Scott Reckard, *More Homeowners with Good Credit Getting Stuck in Higher-Rate Loans*, L.A. Times, p. A-1 (October 24, 2005). For most types of subprime loans, African-Americans and Latino borrowers are more likely to be given a higher-cost loan even after controlling for legitimate risk factors. Debbie Gruenstein Bocian, Keith S. Ernst and Wei Li, *Unfair Lending: The Effect of Race and Ethnicity on the Price of Subprime Mortgages*, Center for Responsible Lending, (May 31, 2006) at http://www.responsiblelending.org/issues/mortgage/reports/page.jsp?itemID=29371010; *See also* Darryl E. Getter, *Consumer Credit Risk and Pricing*, Journal of Consumer Affairs (June 22, 2006); Howard Lax, Michael Manti, Paul Raca, Peter Zorn, *Subprime Lending: An Investigation of Economic Efficiency*, 533, 562, 569, Housing Policy Debate 15(3) (2004).

[33] Debbie Gruenstein Bocian, Keith S. Ernst and Wei Li, *Unfair Lending: The Effect of Race and Ethnicity on the Price of Subprime Mortgages*, Center for Responsible Lending (May 31, 2006). Study finds that African-American and Latino borrowers are at greater risk of receiving higher-rate loans than white borrowers, even after controlling for legitimate risk factors. For example, African-American borrowers with prepayment penalties on their subprime home loans were 6 to 34 percent more likely to receive a higher-rate loan than if they had been white borrowers with similar qualifications.

[34] *Standard & Poor's Weighs in on the U.S. Subprime Mortgage Market* (April 2, 2007), cited by Sheila Bair, Chair, Federal Deposit Insurance Corporation in a statement to the Committee on Financial Services, U.S. House of Representatives (April 17, 2007).

[35] An "assignee" is a party who purchases or otherwise takes a financial interest in the loan. The assignee has the right to collect payments and enforce the terms of the loan, including foreclosing on a house if a borrower defaults.

[36] Vikas Bajaj and Christine Haughney, *"Tremors At the Door: More People with Weak Credit Are Defaulting on Mortgages*," *New York Times* (Fri. Jan. 26, 2007) C1, C4.

[37] Recently Harvard issued a study that also recommended lifting current restrictions on assignee liability—see note 7.

[38] See, e.g., Wei Li and Keith Ernst, *The Best Value in the Subprime Market: State Predatory Lending Reforms*, Center for Responsible Lending (February 23, 2006).

[39] See January 25, 2007 letter from the Coalition for Fair & Affordable Lending (CFAL), an industry association, to the heads of the federal banking regulators, urging the regulators not to apply the October 4, 2006 Interagency Guidance on Nontraditional Mortgage Product Risks to subprime 2-28 ARM loans.

[40] As recently as July, 2007, even as the debacle was unfolding, that remained the case. For example, a borrower with a 620 FICO score, 90% LTV, and 1–30 day delinquency, could get a 30-year fixed rate mortgage at 10.25% from Option One, compared to 11.9% for a 3/27 stated doc loan. At WaMu's Long Beach Mortgage, that borrower could get a 10.1% 30-year fixed rate loan, compared to a 10.95% 2/28 Stated income loan.

[41] For most types of subprime loans, African-Americans and Latino borrowers are more likely to be given a higher-cost loan even after controlling for legitimate risk factors. Debbie Gruenstein Bocian, Keith S. Ernst and Wei Li, *Unfair Lending: The Effect of Race and Ethnicity on the Price of Subprime Mortgages*, Center for Responsible Lending, (May 31, 2006) at http://www.responsiblelending.org/issues/mortgage/reports/page.jsp?itemID=29371010. *See also* Darryl E. Getter, *Consumer Credit Risk and Pricing*, Journal of Consumer Affairs (June 22, 2006); Mike Hudson & E. Scott Reckard, More Homeowners with Good Credit Getting Stuck with Higher-Rate Loans, Los Angeles Times p.A-1 (October 24, 2005); Howard Lax, Michael Manti, Paul Raca, Peter Zorn, *Subprime Lending: An Investigation of Economic Efficiency*, 533, 562, 569, Housing Policy Debate 15(3) (2004).

[42] See, e.g. Nelson Schwartz, "Can the Mortgage Crisis Swallow a Town," *New York Times*, p. Bus 1 (Sept. 2, 2007).

[43] See, e.g., http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/09/13/MNJ8S1FKC.DTL.

[44] In 2005, the bankruptcy law was amended to treat some recent purchase money loans for automobiles in a similar fashion, but the dollar figures for such loans pale in comparison to the amount of a home loan and, depending on fair market value, the amount of equity associated with the residence. Moreover, such loans can still be modified with respect to interest rate and payment amounts.

[45] The family farm Chapter 12 corollary to section 1322(b)(2), found at 11 USC § 1222(b)(2), provides the bankruptcy court with power to "modify the rights of holders of secured claims, or of holders of unsecured claims . . ." Similarly, the corresponding provision of Chapter 11, found at 11 U.S.C. § 1123(b)(5), contains language identical to that in section 1322(b)(2), reaffirming the exemption for loans secured by the debtor's primary residence, but imposing no corresponding exemption for a company's principle place of business or any other property.

[46] Calculations by the CRL using data from its "Losing Ground" report cited above, research from the University of North Carolina, the Home Mortgage Disclosure Act, and Bloomberg research.

[47] Families lose 1.14% of their own house's value for every foreclosure that occurs on their block. Woodstock Institute, "There Goes the Neighborhood: The Effect of Single-Family Mortgage Foreclosures on Property Values," June 2005, http://www.woodstockinst.org/content/view/104/47/. Median house value of $212,000 * 1.14% * 50 houses/block = $121,000 cost/foreclosure * 600,000 avoided = $72.5 billion saved. http://www.realtor.org/Research.nsf/files/MSAPRICESF.pdf/$FILE/MSAPRICESF.pdf

[48] See Geraldine Fabrikant, "After Foreclosure, a Big Tax Bill from the I.R.S.," *New York Times* (August 20, 2007)

[49] Based on MBA's originations survey, cash-out refinancings comprised 80.6% of all subprime refinances in 2006.

Countrywide
AMERICA'S WHOLESALE LENDER
SPECIALTY LENDING GROUP

NORTH CAROLINA RATE SHEET

FIRST LIENS

Full Doc - 5/25 ARM Pricing

	Credit Score	Mortgage History	65%	70%	75%	80%	85%	90%
Premier Plus	680	0x 30x/ 1x 30 No Rolling MODIFC + 36 mo Debt Ratio - 50%	8.950	9.000	9.200	9.400	9.900	10.600
	660		9.100	9.150	9.400	9.750	10.150	10.700
	640		9.150	9.250	9.550	9.900	10.350	11.050
	620		9.350	9.500	9.800	10.100	10.650	11.400
	600		9.550	9.750	10.050	10.600	11.300	11.850
	580		9.750	10.100	10.500	11.000	11.700	12.500
	560		10.200	10.550	10.950	11.400	12.200	13.150
	540		10.450	10.850	11.250	11.900	12.850	
Premier	680	1 x 30 MODIFC + 36 mo Debt Ratio - 50%	9.150	9.200	9.400	9.600	10.100	10.650
	660		9.300	9.350	9.600	9.950	10.400	10.950
	640		9.400	9.450	9.750	10.150	10.600	11.250
	620		9.500	9.700	9.950	10.350	11.050	11.800
	600		9.750	9.950	10.300	10.850	11.550	12.050
	580		10.000	10.350	10.750	11.250	12.400	12.900
	560		10.450	10.850	11.200	11.650	13.000	13.650
	540		10.750	11.100	11.500	12.150	13.400	
A-	680	2 x 30 MODIFC + 36 mo Debt Ratio - 50%	9.400	9.450	9.700	10.050	10.500	11.050
	640		9.500	9.600	9.900	10.250	10.700	11.350
	620		9.650	9.850	10.100	10.450	11.150	11.700
	600		9.900	10.050	10.400	10.900	11.650	12.150
	580		10.150	10.500	10.950	11.350	12.550	
	560		10.600	11.000	11.300	11.750	13.150	
	540		10.850	11.250	11.650	12.250		
B	680	3 x 30 MODIFC + 24 mo Debt Ratio - 50%	9.850	9.900	10.100	10.650	11.700	
	640		9.900	10.000	10.250	10.800	11.800	
	620		10.000	10.200	10.450	11.050	12.350	
	600		10.250	10.450	10.800	11.350		
	580		10.500	10.850	11.300	11.850		
	560		11.000	11.350	11.800	12.250		
	540		11.250	11.650	12.100			

Margin
6.5 for LTV <= 85

Stated - 5/25 ARM Pricing

	Credit Score	65%	70%	75%	80%
Premier Plus	680	10.100	10.200	10.450	10.650
	660	10.250	10.350	10.650	11.000
	640	10.350	10.450	10.800	11.100
	620	10.650 [1]	10.800 [1]	11.100 [1]	11.450 [1]
	600	11.150 [1]	11.350 [1]	11.650 [1]	12.200 [1]
	580	11.350 [1]	11.700 [1]	12.100 [1]	12.600 [1]
Premier	680	10.300	10.400	10.650	10.850
	660	10.450	10.550	10.850	11.200
	640	10.600 [1]	10.650 [1]	11.000 [1]	11.350 [1]
	620	10.800 [1]	11.000 [1]	11.250 [1]	11.700 [1]
	600	11.350 [1]	11.550 [1]	11.900 [1]	12.450 [1]
	580	11.600 [1]	11.950 [1]	12.350 [1]	
A-	680	10.550	10.650	10.950	11.300
	640	10.700 [1]	10.800 [1]	11.150 [1]	11.450 [1]
	620	10.950 [1]	11.150 [1]	11.400 [1]	11.800 [1]
	600	11.500 [1]	11.650 [1]	12.000 [1]	12.500 [1]
	580	11.750 [1]	12.100 [1]	12.550 [1]	

1 - Stated
Self Employed Only

Summer Refi Special

Type	ADJUSTMENTS TO RATES	
Products	Fixed Program (2 yr Prepay)	0.200
	40 Year Amortization Term	0.100
Interest Only	Interest Only****	0.350
Loan Amount	$50K - <$75K	0.750
	$75K - <$100K	0.650
	$100K - <$225K	0.250
Property Type	2nd Home	2.000
	Lo Condo >80 LTV	0.250
	Hi Condo > 80 LTV	0.500
	2 unit <=65 LTV	0.500
	2 unit >65 LTV	2.000
Other	Stated Wage Earner	0.600
	12/24 Month Bank Statements	0.250
	Credit Correction Loan (Start Rate Floor = 8.15%)	0.500
	1st Liens with Subordinate Financing	1.000

PREPAY ADJUSTMENTS
(Add to Rate)

	5/25 and 5/25	Fixed
No Prepay NC <$150,001	0.000%	0.000%
Prepay Expired	0.000%	0.000%
1 yr Prepay	0.300%	0.300%
2 yr Prepay	-	

Guidelines

Section 32 (HOEPA) loans are not allowed
Refer to Subprime Underwriting Matrix for additional details and re-disclosure
Manufactured Homes not allowed
Min Loan amount is $60,000
Maximum amount is $417,000

REBATE / DISCOUNT PRICING

Rebate - Max 2 pts, (Max 1 pt if prepay is bought out)
Add .50% to rate for 1st pt., .75% for the 2nd.
Discount - max 3 pts
.40% off rate for each discount point paid on fixed
.50% off rate for each discount point paid on ARM

****Maximum Interest Rate**
To bring rate into compliance, buy-down pt

Logon to cwbc

Effective: September 5, 2007

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[From the Bloomberg Press online, Aug. 23, 2007]

LEHMAN SHUTS UNIT; TOLL OF LENDERS TOPS 100: SUBPRIME SCORECARD

(By Rick Green)

Lehman Brothers Holdings Inc.'s shutdown of its subprime lending unit helped push the tally of mortgage companies that have halted operations or sought buyers since the start of 2006 to at least 100.

Lehman became the first of Wall Street's five biggest securities firms to close its subprime business yesterday when it shut BNC Mortgage LLC. The New York-based firm bought BNC in 2004 to expand lending to borrowers with weak credit.

Until last year, sales of mortgage companies fetched hundreds of millions of dollars, capped by Merrill Lynch & Co.'s $1.3 billion purchase of First Franklin on Dec. 30. Since then, 15 have gone bankrupt and about 50 have suspended loans or closed entirely. The total may be higher because some defunct firms didn't make public announcements or court filings.

"I don't think we are going to see the bottom for at least another six months," Edward Resendez, ex-chief executive officer of Resmae Mortgage Corp., said yesterday. Resendez sold Resmae to Citadel Investment Group at a bankruptcy auction. "The lenders that are struggling out there are not going to survive. As soon as their liquidity runs out, they are going to go under."

The industry slump pushed shares of mortgage companies down 58 percent from June 14, 2005, through yesterday, according to Bloomberg's index of mortgage real estate investment trusts, compared with a 22 percent gain for the Standard & Poor's 500 stock index. Among last year's 20 largest subprime lenders ranked by Inside Mortgage Finance, a trade publication, more than half have tried to sell themselves or left the business.

LATE LOANS

Overdue payments on U.S. subprime mortgages rose to the highest level since 2002 during the first quarter of this year, according to the Mortgage Bankers Association. That's made investors who buy mortgages reluctant to bid, driving down prices and cutting into the profit of home lenders.

Subprime loans are made to borrowers with poor credit ratings or heavy debts. The mortgages often charge higher interest rates to compensate for the greater risk of default.

The table below tracks sales, shutdowns, bankruptcies and transactions tied to home lenders. The list includes companies that may have offered subprime, prime or Alternative-A loans. The latter are an alternative for A-rated borrowers who fall just short of standards for regular prime mortgages.

Some of the most recent developments:

• Accredited Home Lenders Holding Co. will close "substantially all" of its retail lending business and halt U.S. loan applications. About 1,600 people will lose their jobs.

• Capital One Financial Corp. shut its GreenPoint Mortgage unit, eliminating 1,900 jobs.

• Quality Home Loans, a California-based subprime lender, filed for bankruptcy.

• Amstar Financial Holdings Inc., a Houston-based lender, said its mortgage division will cease operations.

BUSINESSES SOLD	PARENT	BUYER	PRICE ($ MLN)	DATE*
Centex Home Equity	Centex	Fortress	554(c)	Mar. 06
Chapel Funding		Deutsche Bank	N/D	May 06
Aames Investment		Accredited Home	301	May 06
HomEq	Wachovia	Barclays	469	June 06
MortgageIT		Deutsche Bank	430	July 06
Saxon		Morgan Stanley	706	Aug. 06
First Franklin	National City	Merrill Lynch	1,300	Sep. 06
Encore Credit**	ECC Capital	Bear Stearns	26	Oct. 06
Irwin Mortgage**	Irwin Financial	Four buyers	261	Oct. 06
Irwin Mortgage**	Irwin Financial	New Century	N/D	Nov. 06
Champion	KeyCorp	HSBC, Fortress	N/D	Dec. 06
Millennium Funding Grp		Roark Capital	N/D	Dec. 06
EquiFirst	Regions Fin'l	Barclays	76	Jan. 07

BUSINESSES SOLD	PARENT	BUYER	PRICE ($ MLN)	DATE*
ABN Amro Mortgage	ABN Amro	Citigroup	N/D	Jan. 07
New York Mortgage(a)	NY Mort. Trust	IndyMac	14	Feb. 07
New York Mortgage(b)	NY Mort. Trust	Franklin Credit	N/D	Feb. 07
Senderra Funding****		Goldman Sachs	N/D	Mar. 07
ResMae Mortgage		Citadel	180	Mar. 07
PHH Mortgage	PHH Corp.	Blackstone(e)	N/D	Mar. 07
SB Financial		W.J. Bradley	N/D	Mar. 07
MortgageTree Lending		W.J. Bradley	N/D	Apr. 07
Fremont(d)	Fremont General	Ellington		Apr. 07
Lime Financial Services		Credit Suisse	N/D	Apr. 07
New Century servicing		Carrington Cap.	184	Apr. 07
Option One Mortgage	H&R Block	Cerberus Capital	800	Apr. 07
Opteum Fin'l retail	Opteum	Prospect Mortgage	1.5	May 07
Pinnacle Financial		Impac Mortgage	N/D	May 07
Green Tree Servicing	Fortress/Cerberus	Centerbridge	N/D	June 07
First NLC Financial	Friedman Billings	Sun Capital	60	July 07
Winstar Mortgage**		Am. Sterling Bank	N/D	Aug. 07

PARTIAL/POSSIBLE SALE	PARENT			DATE*
ACC Capital assets***	ACC Capital Hld.	Citigroup		Feb. 07
C-Bass/Sherman Fin'l	MGIC/Radian		750(g)	Mar. 07
WMC Mortgage	General Electric			July 07
CIT home lending	CIT Group			July 07
Delta Financial		Gordon / Pabrai		Aug. 07
Luminent Mortgage		Arco Capital		Aug. 07

CUTS/CLOSED/BANKRUPT	PARENT	STATUS	DATE*
Acoustic Home Loans		Halted applications	Apr. 06
Ameriquest Mortgage	ACC Capital Hld.	Shut retail branches	May 06
Meritage Mortgage	NetBank	Closed	Nov. 06
Summit Mortgage	Summit Financial	Closed	Nov. 06
Sebring Capital		Closed	Dec. 06
Ownit Mortgage Solutions		Bankruptcy	Dec. 06
Harbourton Mortgage	Harbourton Capital	Closed	Dec. 06
Alliance Home Funding	Alliance Bankshrs.	Closed	Dec. 06
Millennium Bankshares		Closed mortgage unit	Dec. 06
Popular Financial	Popular	Closed subprime unit	Jan. 07
Bay Capital	Clear Choice Fin'l	Closed	Jan. 07
EquiBanc Mortgage	Wachovia	Closed	Jan. 07
Funding America LLC	Ocwen Financial	Closed	Jan. 07
DeepGreen Financial	Lightyear Capital	Closed	Jan. 07
Eagle First Mortgage		Closed	Jan. 07
Mortgage Lenders Network		Bankruptcy	Feb. 07
Lenders Direct Capital		Halted wholesale loans	Feb. 07
ResMae Mortgage		Bankruptcy, revived	Feb. 07
Central Pacific Mortgage		Closed	Mar. 07
FMF Capital LLC	FMF Capital Group	Closed	Mar. 07
Silver State Mortgage		License revoked	Feb. 07
Ameritrust Mortgage		Shut subprime unit	Mar. 07
Master Financial		Halted originations	Mar. 07
Investaid Corp.		Suspended	Mar. 07
People's Choice		Bankruptcy	Mar. 07
LoanCity		Closed	Mar. 07
New Century Financial		Bankruptcy	Apr. 07
SouthStar Funding		Bankruptcy	Apr. 07
Peoples Mortgage	Webster Financial	Closed	Apr. 07

CUTS/CLOSED/BANKRUPT	PARENT	STATUS	DATE*
WarehouseUSA	NovaStar	Closed	Apr. 07
Copperfield Investments		Bankruptcy	Apr. 07
First Horizon National		Halted subprime loans	Apr. 07
Opteum Fin'l wholesale	Opteum	Closed unit(h)	Apr. 07
H&R Block Mortgage	H&R Block	Closed	Apr. 07
MILA(i)		Bankruptcy	Apr. 07
Texas Capital Bank	Texas Cap. Banc.	Closed mortgage unit	Apr. 07
Millennium Funding Grp	Roark Capital	Halted originations	Apr. 07
Columbia Home Loans	OceanFirst	Closed	May 07
Lancaster Mortgage		Halted wholesale loans	June 07
Oak Street Mortgage		Bankruptcy	June 07
Starpointe Mortgage		Closed	June 07
Heartwell Mortgage(j)		Halted retail/wholesale	June 07
Wells Fargo		Shut correspondent unit	June 07
Premier Mortgage Funding		Bankruptcy	July 07
Alliance Mtg Investments		Bankruptcy	July 07
Wells Fargo		Shut subprime wholesale	July 07
Entrust Mortgage		Halted loans	July 07
Alternative Financing		Halted wholesale loans	Aug. 07
Trump Mortgage		Closed	Aug. 07
American Home Mortgage		Bankruptcy	Aug. 07
MLSG Home Loans		Halted loans	Aug. 07
Impac Mortgage		Suspended Alt-A loans	Aug. 07
Fieldstone	C-Bass	Closed	Aug. 07
HomeBanc Mortgage	HomeBanc Corp.	Bankruptcy	Aug. 07
Aegis Mortgage	Cerberus(k)	Bankruptcy	Aug. 07
Regions	Regions Fin'l	Shut warehouse unit	Aug. 07
Express Capital Lending		Halted acceptances	Aug. 07
Bay Finance	Commerce Group	Halted loans	Aug. 07
First Indiana		Shut wholesale unit	Aug. 07
Guardian Loan		Closed	Aug. 07
Unlimited Loan Resources		Halted loans	Aug. 07
Pacific American Mtg.	Golden Empire	Halted wholesale loans	Aug. 07
Thornburg Mortgage		Suspended applications	Aug. 07
National Home Equity	National City	Halted loans, merged	Aug. 07
NovaStar Financial		Halted wholesale loans	Aug. 07
GreenPoint Mortgage	Capital One	Shut wholesale unit	Aug. 07
First Magnus Financial		Bankruptcy	Aug. 07
First Nat'l Arizona	1st Nat'l Hld	Halted wholesale loans	Aug. 07
Quality Home Loans		Bankruptcy	Aug. 07
Amstar Mortgage	Amstar Financial	Closing	Aug. 07
Accredited Home		Halted loans	Aug. 07
BNC Mortgage	Lehman Brothers	Closed	Aug. 07

Notes:

— Some names have been abbreviated for space. Companies listed may have engaged in conventional, Alternative A or subprime mortgage lending. Status of deals and companies, prices and terms are subject to adjustment after the announcement date.

N/D Not disclosed or not available.

* Announced date, first known disclosure or effective date if disclosed after completion. Some announced closings have not yet been completed.

** Asset sale

*** Citigroup obtained an option to buy ACC Capital's wholesale mortgage origination and servicing businesses.

**** Per Goldman Chief Financial Officer David Viniar 6/14/07 in conversation with reporters. Web site lists company name as Avelo Mortgage LLC d/b/a Senderra Funding.

(a) Retail assets

(b) Wholesale assets

(c) Actual price before taxes, per 10-Q filing. Centex's release cited after-tax proceeds of about $540 million.

(d) Residential subprime unit

(e) After sale of PHH Corp. to General Electric Co.

(f) Purchased in July 2007 for $188 million.
(g) Projected, after taxes, from partial divestiture. See Page 41 of the MGIC Form S–4, March 19, 2007.
(h) Units served mortgage brokers and bought home loans from mortgage bankers, thrifts, builders and credit unions.
(i) Formally known as Mortgage Investment Lending Associates.
(j) Confirmed by company e-mail on July 5, 2007.
(k) Owners included Cerberus Capital Management LP. Retail lending halted in June, wholesale lending in August.

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SCORECARD: DEBT DILEMMAS

How Credit-Market Tremors Have Affected Junk Bonds, LBOs and Hedge Funds

The days of easy credit may be coming to an end. The jitters began with losses at two Bear Stearns hedge funds that invested in subprime-mortgage debt that now are worth almost nothing. And over the past few weeks, a string of companies has delayed or canceled debt offerings, a sign that investors may be less interested in debt deals that don't adequately reward them for potential risk. — *Compiled by Annelena Lobb and Cassandra Vinograd*

Click on the category names to sort the columns.

Problems First Reported ↑	Issuer or Fund	Problem	Description	The Latest
09/17/2007	E*Trade Financial Corp.	Earnings warning	The popular retail online brokerage said it expects profits to come in 31% below the most recent guidance it had given analysts -- partly due to its exposure to the mortgage business.	E*Trade, a buyer of mortgages from third parties, plans to get out of that business altogether and has set aside $245 million, up from $70 million, to cover related losses over the next four quarters.
09/14/2007	Northern Rock PLC	Liquidity crunch	The Bank of England agreed to provide emergency funding to Northern Rock, one of the U.K.'s largest mortgage lenders, to offset a "severe liquidity squeeze" that cut off its access to capital.	If current conditions persist through year-end, "there will clearly be an impact on Northern Rock's 2007 asset growth and, therefore, on profits," the Newcastle, England-based bank said in a statement.
09/11/2007	Y2K Finance Inc.	Hedge fund losses	The $2 billion hedge fund, managed by London-based Wharton Asset Management, suspended investor redemptions until at least Dec. 1 because of market turbulence.	The Ireland-registered fund, which invests in residential mortgage-backed securities and other asset-backed debt, also said it plans to postpone calculating its net asset value.
09/10/2007	Insight Communications	Auction delayed	Carlyle Group shelved the sale of the New York cable company, Deal Journal reported, citing people familiar with the matter. The surge in borrowing costs in the leveraged loan and bond markets derailed the deal, as bids didn't live up to Carlyle's expectations.	Carlyle still plans to sell Insight, which it bought for about $2 billion including debt in 2005. One banker involved in the deal said this could just be a tactic on Carlyle's part to get the bidders to raise their offers.
09/06/2007	TPG-Axon Capital Management	Fund losses	The $11 billion hedge fund has had to write down to virtually zero its $275 million investment in Axon Financial Funding, a structured investment vehicle hit by subprime-mortgage troubles.	If Axon Financial -- a hedge for TPG-Axon manager Dinakar Singh, who has successfully bet on trouble in the subprime market -- gets through this rough period, the hedge fund's stake in the company could rise in value.
08/28/2007	Cheyne Finance	Liquidity crunch	Cheyne Finance, a $6.6 billion structured investment vehicle managed by Cheyne Capital, one of London's biggest hedge fund groups, has started selling assets amid a debt squeeze. Cheyne said it breached tests measuring the value of its assets against its liabilities, forcing it to start liquidating holdings.	Cheyne Finance said it has enough cash on hand to pay back debt maturing before the end of November, and will try to avoid completely winding down by reaching an agreement with lenders.

08/27/2007	Nacco Industries	Spinoff scrapped	The Cleveland-based holding company of lift trucks, housewares and mining business said the recent period of market volatility isn't conducive to spinning off its Hamilton Beach unit.	Hamilton Beach, a maker of electric household appliances, will continue to operate as usual.
08/22/2007	Carlyle Capital	Liquidity crunch	The listed investment fund, which trades on the Euronext Amsterdam exchange, recently received $200 million in emergency financing from U.S. private equity firm Carlyle Group.	The fund said it will seek new forms of financing and reduce its target leverage. CEO John Stomber said funding conditions are worse than in 1998, at the time of the collapse of Long-Term Capital Management.
08/22/2007	The Republic of Belarus	Auction delayed	The government put on hold plans to issue $500 million-equivalent of Eurobonds. "Taking under consideration current unfavorable market conditions we have decided to postpone any decision on the issue of Eurobonds until markets improve," said First Deputy Finance Minister Andrei Kharkovets.	Mr. Kharkovets said he doesn't expect to make any decision on the Eurobond until the end of September.
08/22/2007	Coventree Inc.	Profit problems	The Toronto financial firm said short-term revenue will be severely impacted by the turmoil in Canada's asset-backed commercial paper market.	Due to the market turmoil and other factors facing the company, Coventree said it "has decided to suspend any additional investments in new concepts or business opportunities. In particular, Coventree will not be pursuing the creation of a U.S. conduit or the launch of a retail bank at this time."
08/22/2007	H&R Block	Liquidity crunch	The tax preparer was forced to tap $850 million under existing backup bank credit lines to replace commercial paper as it came due.	The company became the latest issuer with mortgage exposure to find itself unable to borrow the funds it needed in the commercial-paper market.
08/20/2007	Solent Capital Partners LLP	Liquidity crunch	The London hedge-fund and money manager said it couldn't raise money, finding few buyers for the euro and U.S. short-term debt a debt vehicle used for financing, and may have to sell some assets.	The debt vehicle, Mainsail II Ltd., owns about $2 billion in securities supported by assets that include U.S. mortgages, according to a Fitch Ratings report. Mainsail said it had turned to backup bank lines of credit for funding.
08/17/2007	Barclays Capital	Liquidity crunch	Two structured investment vehicles of Barclays Capital, the investment-banking division of Barclays PLC, have collapsed, while two others may have to wind down after having trouble raising short-term funding.	Barclays Capital's European head of collateralized debt obligations, Edward Cahill, resigned. On Sept. 10, Bob Diamond, head of investment banking at Barclays, said Barclays Capital was profitable, easing investor concerns. He also said Barclays had been restructuring its SIVs, but said those efforts were not "bailouts"
08/17/2007	Sachsen LB	Liquidity crunch	A consortium of banks stepped in to bail out the small German state-owned bank after an affiliate faced difficulties selling commercial paper to finance its operations.	Sachsen was sold to Stuttgart-based state-owned bank Landesbank Baden-Wuerttemberg. Under the terms of the deal, Gov. Guenther Oettinger said, the state of Saxony, which holds 37% in Sachsen, and the Sachsen-Finanzgruppe, owner of 63%, will receive stakes in LBBW, but that exactly how large these stakes will only be determined on Dec. 31.
08/15/2007	KKR Financial Holdings Inc.	Profit problems	The San Francisco affiliate of buyout firm KKR said it could lose more than $200 million from leveraged investments in mortgage-backed securities,	KKR Financial said it is talking to other investors in its portfolio about how to resolve potential funding disruptions. KKR partners promised on Aug. 20 that in a worst-case

			sending its stock tumbling.	scenario they will invest $100 million in the unit.
08/14/2007	RAMS Home Loans Group Ltd.	Profit problems	The Australian non-bank lender said volatile credit markets could hit its earnings, sending shares in the recently listed lender down as much as 32%.	The first Australian mortgage company to suffer from global credit squeeze and the first to have problems related to the asset-backed commercial paper market in the U.S.
08/14/2007	Thornburg Mortgage	Liquidity crunch	The Santa Fe, N.M.-based REIT, which originates "jumbo" mortgage loans of more than $417,000, stopped locking in rates on mortgages, citing "unprecedented and irrational sentiment" in the credit market. Moody's downgraded its credit and several analysts downgraded its stock.	Thornburg delayed its dividend payment after getting margin calls and finding it more difficult to fund its mortgage assets in the commercial-paper and asset-backed securities markets. It cut the book value of its mortgage assets by 26%. Its shares plunged 46% on the day of these announcements. A week later, it sold $20.5 billion in top-rated mortgage-backed securities to pay down short-term borrowings, resulting in a third-quarter capital loss of about $930 million.
08/14/2007	Sentinel Management Group	Liquidity crunch	The Northbrook, Ill., firm, which manages short-term cash for commodity trading firms and hedge funds, stopped allowing its clients to withdraw funds, saying a lack of liquidity in the credit markets has made it impossible to meet redemptions without selling securities well below their fair value.	The company has filed for bankruptcy-court protection. On Aug. 20, the SEC filed civil-fraud charges against Sentinel, accusing it of "undisclosed use of leverage, commingling and misappropriation of clients' securities."
08/13/2007	Mission West	Buyout scuttled	The real-estate investment trust said closure is unlikely on its $1.8 billion buyout by an unnamed private-equity firm due to the withdrawal of the buyer's primary and secondary lenders from the market.	Mission West is in talks with three other potential acquirers with internal sources of financing.
08/09/2007	Tarragon Corp.	Profit problems	The New York real-estate developer said there were doubts about its ability to to continue as a going concern, citing "liquidity issues" and market conditions. It also delayed its 10Q filing and postponed a spinoff of its homebuilding business.	The company has hired Lazard to explore strategic alternatives. Its shares have plunged to less than $1.
08/09/2007	NIBC	Profit problems	The Dutch merchant bank, owned by former Goldman Sachs banker Christopher Flowers, said it has lost at least $187 million on subprime investments	Investors in NIBC unable to buy protection against a default of the company's debt amid concerns about the bank's health and rumors it was being prepared for a sale. JC Flowers, the private equity firm that owns NIBC with a consortium of fellow investors, is believed to be preparing to sell the embattled bank.
08/09/2007	Home Depot	Buyback trimmed	The retailer will now buy back shares in a modified Dutch auction at $37 to $42 a share, down from the range of $39 to $44 a share announced in July.	Extended tender offer deadline to Aug. 31. Home Depot's board agreed on Aug. 26 to sell the supply business for $8.5 billion to Bain Capital, Carlyle Group and Clayton, Dubilier & Rice, about 18% less than the price hammered out in June when the buyout boom was at its peak. Home Depot will also be left holding a 12.5% equity stake in the unit.
08/09/2007	American International Group	Profit problems	Operating income at its consumer-finance operations, which includes a subprime-mortgage lender, fell 71%;	Acknowledged that housing-market weakness led to a significant increase in losses for its domestic mortgage-insurance business, but

			mortgage-guaranty insurance business had a quarterly operating loss of $78 million	said it remains "comfortable" with its exposure to the U.S. mortgage market
08/07/2007	United Overseas Bank Ltd.	Profit problems	The Singapore bank reported a markdown of about $22.4 million on its portfolio of collateralized debt obligations, the first Singapore bank to acknowledge such a loss amid the subprime crisis.	UOB said it expects to incur a further loss as of the end of July.
08/07/2007	BNP Paribas Investment Bankers	Funds suspended	The "complete evaporation" of liquidity in certain parts of the subprime mortgage market pressured funds	Bank said it would suspend three funds, Parvest Dynamic ABS, BNP Paribas ABS Euribor and BNP Paris ABS Eonia, worth a total of about €1.5 billion. On Aug. 23, said it planned to resume trading in the funds the following week.
08/06/2007	Luminent Mortgage Capital	Margin calls	A week after reassuring investors of its liquidity and ability to pay a dividend, the San Francisco home-loan investment company said it was facing significant margin calls, suspending its dividend and exploring strategic alternatives. It said the econdary market for mortgage loans and mortgage-backed securities "has seized-up."	Luminent said it's trying to "enhance its liquidity and preserve the value" of its portfolio of assets.
08/06/2007	Archstone-Smith Trust	Buyout delayed	A joint venture of Tishman Speyer Properties and Lehman Brothers Holdings said it would delay the completion of its $15.2 billion acquisition of apartment-owning titan Archstone-Smith to early October.	Financiers of this deal -- seen as a bellwether in the real-estate market -- may be looking for fresh financing sources to minimize their own risk. On Aug. 21, shareholders approved the deal, a positive sign.
08/03/2007	KfW	Profit problems	German state-owned development bank said it assumed "expected possible losses" of as much as $1.37 billion from bailing out midsize lender IKB	KfW put up the lion's share of the 3.5 billion euro rescue fund set up to cover IKB's likely losses when IKB does sell its investments; IKB said it has reserves that are strong enough to cover it for the next 12 months
08/02/2007	Mitchells & Butler	Venture postponed	U.K. pub operator had planned to separate out its property assets from its operating divisions	Planned property joint venture put on hold due to unstable credit market conditions
08/01/2007	Oddo & Cie	Fund losses	French securities firm struggles with plunge in collaterized debt obligations	Three funds totaling 1 billion euros will be closed (Correction: An earlier version of this table incorrectly said these were hedge funds)
08/01/2007	Fortress Investments	Hedge fund losses	Macquarie bank's high-yield Australian fund said investors could face losses of up to 25% due to U.S. market fallout	Fortress has had to sell some assets, said average price of assets in the portfolios had fallen by 4% in June and may have fallen a further 20-25% in July; could face margin calls if assets don't sell well
07/31/2007	CNA Financial	Profit problems	Chicago commercial insurer reported lower quarterly earnings as investment losses increased due to write-downs on subprime debt	Company says it suffered $91 million in losses, partly due to a $20 million write-down related to subprime debt; this contributed to a 9% decline in quarterly profit
07/31/2007	Sowood	Hedge fund losses	Boston firm suffered losses of more than 50% this month, dropping the firm's assets to about $1.5 billion from $3 billion	Sowood said it will wind down its two funds
07/31/2007	C-Bass	Margin calls	MGIC Investment and Radian Group say joint venture C-Bass	MGIC and Radian agreed to terminate their merger pact

			has been subject to an "unprecedented" amount of margin calls, adversely affecting liquidity	because of losses at C-Bass. All litigation the firms filed against each other will be withdrawn and that no money changed hands in ending the merger agreement.
07/30/2007	Commerzbank	Hedge fund losses	German bank said its total exposure to the US subprime market is 1.2 billion euros	Set aside 80 million euros to cover exposure to US subprime market
07/30/2007	Insight Communications	Offering delayed	Bids for the New York cable operator were due yesterday, now delayed more than a week by the firm's bankers	Bankers at Morgan Stanley delayed to give private-equity bidders more time to line up financing
07/30/2007	Stoneridge	Offering delayed	$200 million senior secured term loan postponed indefinitely due to "unfavorable market conditions	The electronic component maker was forced to cancel its tender offer to purchase its $200 million in outstanding senior notes
07/30/2007	American Home Mortgage Investment	Margin calls	Banks demanded more cash after the lender wrote down the value of its loan and security portfolios	Shares of the real-estate investment trust were halted for more than a day; lender delayed paying dividends on common stock, may delay payments on preferred shares because of margin calls; said may have to sell assets, find new financing, or restructure debt to meet banks' demands. Filed Chapter 11 bankruptcy Aug. 6 after laying off majority of its workforce the week before
07/30/2007	IKB Deutsche Industriebank AG	Liquidity crunch	The German bank set up an affiliate to invest in complex U.S. debt securities. The affiliate, Rhineland Funding Capital Corp., had to renew its short-term borrowings frequently. When investors realized its collateral included subprime mortgages, they shut off the spigot. Suddenly, Rhineland couldn't repay other debt that was coming due and needed a bailout by Germany's financial regulator, with contributions from major German banks.	Three of IKB's top executives, including Chief Executive Stefan Ortseifen, departed. The bank formed a task force to sort out its problems. Its stock has tumbled sharply since the crisis began.
07/27/2007	AA/Saga	Offering delayed	Merger underwriters Barclays and Mizuho banks have so far failed to find sub-underwriters to spread £4.8 billion risk	The sale of the GBP 4.8 billion of debt backing the merger of Saga, a group specializing in services for over-50s, and motor-vehicle recovery and insurance company AA has been postponed.
07/27/2007	Dana Gas	Offering delayed	The U.A.E.-based firm postponed pricing its $1 billion convertible Islamic bond due to market volatility	Dana Gas was advised by Barclays and Cit to delay pricing until September
07/27/2007	Sowood Capital Management	Hedge fund losses	Down about 10% so far this year	Sold various positions to raise cash to deal with credit difficulties and potential margin calls; faces no redemptions until end of 2008
07/27/2007	Cadbury Schweppes	Auction delayed	Final bids in the auction of its U.S. drinks business, including the 7-Up, Snapple and Dr. Pepper brands, were due at the start of next week	Extended the bid deadline, citing "extreme volatility" in the leveraged debt markets
07/26/2007	Beazer Homes	Credit reduced	Banks halved the home builder's credit line to $500 million from $1 billion	Beazer vehemently denies rumors it will file for bankruptcy
07/26/2007	Gazprom	Offering delayed	Gazprom, the world's largest gas company, decided not to price its 30-year benchmark dollar Eurobond, citing market conditions	Gazprom said it will release the bond as soon as the market settles
07/26/2007	Tyco	Offering	Called off $1.5 billion bond deal,	Tyco had come to the market with a

		pulled	citing "unfavorable" market conditions	three-part note via Goldman Sachs and UBS
07/26/2007	Brazilian Federal Treasury	Offering pulled	Called off a regularly-scheduled sale of its main LTN bonds, citing "market conditions"	Early next week, Treasury will issue its August schedule; typically, holds bond sales once or twice a week
07/26/2007	DAE Aviation	Offering delayed	Barclay's Capital postpones a $937 million loan, citing market conditions	Barclay's successfully priced $325 million in senior notes tied to the same deal
07/26/2007	Absolute Capital	Hedge fund losses	Australian fund, which is half owned by ABN Amro, temporarily suspends withdrawals on two funds with about 200 million Australian dollars (US$176.7 million) invested. The two funds, exposed to structured credit assets, lost up to 6% in value in July	Withdrawals suspended until market liquidity improves
07/25/2007	Nomura Holdings	Profit problems	Japan's biggest investment bank took a $260 million write-down in its fiscal first quarter to account for subprime losses.	Nomura slashed its subprime positions to $589 million from $1.74 billion and downsized its mortgage bond business. It also shuttered its New York fixed-income research team, led by Mark Adelson, its high-profile managing director of structured finance research.
07/25/2007	Countrywide Financial	Profit problems	Largest U.S. home mortgage lender took losses on prime mortgage loans and stirred fear the subprime crisis would spread	Lender said prime mortgage loan losses contributed to 33% drop in second-quarter net income; slashed earnings forecast, citing "increasingly challenging housing and mortgage markets." Announced Aug. 9 that "unprecedented disruptions" in debt and mortgage-finance markets could hurt the company's financial condition. Merrill Lynch downgraded the stock to "sell," warning bankruptcy was possible. Countrywide tapped an $11.5 billion line of credit and had its banking arm provide a greater share of funding for its loans. Bank of America made a $2 billion equity investment in Countrywide, offering it a dose of security.
07/25/2007	Silverton Casino	Offering pulled	$215 million high-yield bond sale pulled due to market conditions	The casino operator says it remains committed to the project
07/25/2007	Oneida	Offering pulled	$120 million bank loan canceled due to market conditions	The seven-year term loan was led by Credit Suisse; rates had been higher than investors expected
07/25/2007	Stolle Machinery	Offering pulled	$250 million bank loan pulled due to market conditions	Machinery supplier forced to pull its Goldman Sachs-led loan; earlier, Stolle had offered rates higher than investors expected and had restructured the intial deal by adding a second-lien price
07/24/2007	Oxygen Media	Offering pulled	$345 million loan cancelled due to market conditions	J.P. Morgan and RBS Securities had launched the senior secured financing
07/24/2007	Allison Transmission	Offering delayed	Postponed a sale of $3.5 billion in loans to finance Allison's buyout	The sale of Allison to Carlyle Group and Onex Group is likely to proceed, but trouble raising debt complicates matters. On Sept. 11, Deal Journal reported that banks have managed to sell $1 billion of the loans they were holding -- though they were still on the hook for the rest of the loans, in addition to another $1.1 billion in junk bonds.

07/23/2007	Manchester United	Offering delayed	The U.K. soccer club delayed its plans to refinance $1.4 billion in debt	Manchester United cited turbulence in the markets as the reason behind its decision
07/23/2007	Intergen	Offering revised	The power company revised size and structure of its bond issuance	Intergen lowered the value of three-currency bond issuance to $1.875 billion from $1.975 billion
07/23/2007	Y2K Finance	Hedge fund losses	$2 billion London hedge fund blamed price drops on its holdings of U.S. subprime assets in a letter to investors explaining losses	The firm, part of Wharton Management, said its investments dropped 7.3% in June; fund is down 5.24% this year
07/20/2007	Stone Tower Credit Fund	Hedge fund losses	Fund told investors its portfolio value fell by 1.2% in June	June was the first down month since the fund, with $637 million under management, began investing in 2001; value reportedly continues to decline
07/20/2007	Basis Capital Funds Management	Hedge fund losses	Two funds invested in instruments related to U.S. subprime mortgages posted steep losses last month	The Sydney fund restricted investor withdrawals and is trying to restructure. It was the first hedge fund in Asia to show significant fallout related to U.S. subprime woes. Recently said losses in its Yield Alpha Fund may exceed 80%.
07/20/2007	Alliance Boots	Offering delayed	Having trouble raising the dollar equivalent of $18.4 billion in loans	Senior loan postponed indefinitely until market conditions improve; junior loans being offered to investors at interest rates higher than planned
07/20/2007	Chrysler Group	Offering delayed	Struggle to raise $20 billion in loans to finance Cerberus Capital Management's purchase of an 80% stake in Chrysler from DaimlerChrysler, which is still slated for August 3	Bankers have postponed a sale of $12 billion in debt for the auto company, citing weak demand, and plan to fund the bulk of that debt from their own pockets for the time being. Bankers still expect to raise another $8 billion in loans for Chrysler's profitable finance unit, though they have had to raise interest rates on those loans.
07/19/2007	Cyrela Brazil Realty	Offering delayed	Upscale Brazilian real estate developer postponed its $265 million overseas bond issue amidst unfavorable market conditions	Cyrela cited growing investor risk aversion for the reason behind the postponement
07/19/2007	Edenor	Offering delayed	The Argentine electricity distributor, also known as Empresa Distribuidora, postponed a $220 million planned bond offering due to market conditions	Edenor said it would contemplate returning to the market over the near term, subject to regulations and market conditions
07/18/2007	AXA SA	Fund losses	French insurer's billion dollar bond fund lost about 40% of its value last month when credit markets slid	Money-management unit has offered to cash out investors at current estimated values, to avoid having to conduct a rapid sale of securities to meet redemptions; had earlier had to temporarily close two funds
07/18/2007	Harmony Gold	Offering delayed	Delayed $350 million bond issue	Plans on hold pending market improvement
07/18/2007	OAC Rosneft	Offering delayed	Postponed bond placement, pulled a $2 billion two-tranche offer	Rosneft still trying to refinance part of the $22 billion of debt it took on to buy assets of OAO Yukos earlier this year.
07/17/2007	A-TEC	Offering delayed	Delayed hybrid eurobond release	Plans on hold pending market improvement
07/16/2007	Telemobil S.A.	Offering delayed	The Romanian telecommunications company postponed its $125 million inaugural senior secured notes offering due to market volatility	On hold indefinitely

07/16/2007	Maxeda	Offering pulled	$1.4 billion offering canceled	KKR forced to alter loan financing after Citigroup and ABN Amro canceled plans to sell $1.4 billion in debt
07/12/2007	Aozora	Offering delayed	The Japan-based bank postponed issuance of its dollar-denominated, step-up, callable, subordinated bond due to market volatility	The bank said it intends to return to the bond market once conditions stabilize
07/11/2007	First Gulf Bank	Offering delayed	Delayed launch of $3.5 billion eurobond program due to market volatility	Plans on hold pending market improvement
07/11/2007	Quebecor	Offering pulled	$750 million bond sale, which was to be used to acquire Osprey Media Income Fund, postponed	Could get a bank bridge loan
07/10/2007	Swift & Co.	Offering pulled	The meat processing company was offering $600 in notes to finance the buyout of J&F Participacoes	The offering, run jointly by J.P. Morgan and Credit Suisse, was withdrawn
07/06/2007	Bank of Moscow	Offering delayed	The bank postponed its inaugural, five-year $272.7 million bond issue due to market volatility	Unsure when or if the bank will still carry out the euro-denominated issue
07/06/2007	Caliber Global Investment	Hedge fund losses	Cambridge Place's London-based fund, once worth $908 million, had majority of its investments in US subprime mortgage debts	Suffered net loss of 8.8 million euros in the first quarter alone; fund will close, money to be returned to investors
07/05/2007	Braddock Financial	Hedge fund losses	Fund invested mainly in bonds backed by subprime mortgages; investors withdrew money	$100 million in losses in the Galena Street Fund; fund closed
07/04/2007	Carphone Warehouse	Offering delayed	U.K. mobile-phone retailer put its sterling-denominated bond issue on hold because of turbulence in credit markets	Carphone Warehouse is expected to return to the market in the fall, when conditions are more favorable
07/03/2007	CanWest Mediaworks	Offering reduced	Market conditions caused CanWest to abandon a high-yield debt issue in connection with its purchase of Alliance Atlantis	CanWest and partner Goldman Sachs said bridge financing has been lined up and the $2.3 billion deal will close on Aug. 15, a one-week delay from the previous plan.
07/03/2007	United Capital Asset Management	Hedge fund losses	Held $500 million in assets, heavily tied to subprime mortgages	Stopped letting investors withdraw money after a deluge of withdrawal requests
06/29/2007	Bombardier Recreational Products	Loan postponed	Subprime fallout forces postponement of $1.12 billion bank loan, according to Reuters	Waiting for the market to settle
06/29/2007	Oreck	Offering pulled	Vacuum company's $200 million debt refinancing loan withdrawn due to market conditions	Plans on hold indefinitely
06/28/2007	Dollar General	Offering terms changed	Dollar General, which is being acquired by private equity firms, changes terms of $1.9 billion junk bond offering and raises interest rates to entice buyers.	Offering closed; bonds had 14 new covenants
06/27/2007	KIA Motors	Offering pulled	South Korea's KIA pulled a five-year $500 million bond offering due to market conditions	Company rumored to consider trying again when market conditions become more favorable
06/27/2007	MISC BHD	Offering delayed	Market volatility postpones $750 million bond issue	The Malaysian carrier of liquefied natural gas put its 10-year bond issue on hold until market improves
06/27/2007	Myers Industries	Offering delayed	Delayed launch of a buyout-financing deal in the hope the market would settle down in coming days	Plans still on hold

06/27/2007	Magnum Coal	Offering delayed	Delayed a $350 million junk offering	Underwriters postponed offer indefinitely
06/26/2007	U.S. Foodservice	Offering pulled	Investors balk over terms of $3.6 billion bond-and-loan deal needed to finance sale of firm to private equity firms KKR and Clayton Dubilier.	Underwriters left holding debt on their books and will try to sell later; so far, have shopped it around to a frosty reception
06/26/2007	ServiceMaster	Offering pulled	Called off a $1.15 billion sale of junk to pay for ServiceMaster's LBO; bond investors balked at provisions that would have enabled the company to put off interest payments and instead take on additional debt if the company were to run short of cash.	Received its financing from a bridge loan directly from the underwriters
06/26/2007	Catalyst Paper	Offering pulled	Citing "adverse" conditions, the company pulled a $150 million offering that had already been cut from $200 million, planned for funding its business and other investments	Underwriters postponed offer indefinitely
06/26/2007	Arcelor Finance	Offering delayed	Put off plans to issue $1.34 billion in bonds, citing turbulent debt market	Plans still on hold
06/22/2007	Thomson Learning	Offering pulled	$540 million bond sale canceled	Underwriters left holding the debt
06/12/2007	Bear Stearns	Hedge fund losses	Two funds, which once controlled $10 billion, had invested in subprime-mortgage debt; a third had practically no exposure to subprime mortgages but had suffered from a series of refund requests and markdowns on a range of mortgages	The Enhanced Leverage Fund quickly went belly up. High-Grade Structured Credit Strategies got a $1.6 billion bailout from Bear Stearns, but lenders have seized most of the fund's remaining assets. Both funds are now nearly worthless, and filed for bankruptcy protection Aug. 1. Withdrawals from the Asset-Backed Securities Fund, which had put about $850 million into mortgage investments, were suspended Aug. 1. Conference call Aug. 3 tried to reassure investors, said firm is facing worst market conditions in years. Co-President Warren Spector resigned.
05/07/2007	Dillon Read Capital Management	Hedge fund losses	UBS' in-house hedge fund trading in mortgage securities	$123 million in losses from trades on mortgage securities; fund closed after losses weighed on bank's fixed income revenue; UBS said it expects the bank to book costs of up to $300 million to shut the fund
08/9/2007	Highbridge Capital Management	Hedge fund losses	The hedge-fund manager told investors its Highbridge Statistical Opportunities Fund was down 18% as of Aug. 8 and was down 16% for the year. The $1.8 billion publicly traded Highbridge Statistical Market Neutral Fund was down 5.2% for the month.	In a letter to investors, Highbridge said it was "actively managing" its exposure amid "unprecedented volatility."
08/9/2007	Highbridge Capital Management	Hedge fund losses	The hedge-fund manager told investors its Highbridge Statistical Opportunities Fund was down 18% as of Aug. 8 and was down 16% for the year. The $1.8 billion publicly traded Highbridge Statistical Market Neutral Fund was down 5.2% for the month.	In a letter to investors, Highbridge said it was "actively managing" its exposure amid "unprecedented volatility."
08/9/2007	Renaissance Technologies Corp.	Hedge fund losses	The hedge-fund company run by Jim Simons had been a standout performer in recent years, but told investors that a key fund has	The computer-model-driven fund has since rebounded a bit. Mr. Simons sent a letter to investors saying, "The culprit is not the Basic

			lost 8.7% in early August and was down 7.4% in 2007.	System but our predictive overlay."
08/8/2007	Goldman Sachs	Hedge fund losses	Goldman's famed, $9 billion Global Alpha fund was down about 16% on the year at the beginning of August, while its $3.6 billion Global Equity Opportunities Fund lost more than 30% of its value in one week in early August, and its $757 million North American Equity Opportunities fund was down about 15%.	All three funds were forced to sell risky positions. Like many other hedge funds suffering lately, both rely on computer models that were blindsided by the turmoil of financial markets sparked by credit worries. Goldman tried to bolster confidence in the Global fund by a letter to investors calling its performance "disappointing" but saying it expected no shortage of liquidity.

Sources: WSJ.com research, Dow Jones Newswires, Reuters, S&P, Barings

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PREPARED STATEMENT OF ALEX J. POLLOCK, RESIDENT FELLOW, AMERICAN ENTERPRISE INSTITUTE

Mr. Chairman, Ranking Member Saxton, Vice Chair Maloney and members of the Committee, thank you for the opportunity to be here today. I am Alex Pollock, a Resident Fellow at the American Enterprise Institute, and these are my personal views. Before joining AEI, I spent 35 years in banking, including 12 years as President and CEO of the Federal Home Loan Bank of Chicago, and am a Past President of the International Union for Housing Finance. I have both experienced and studied many credit cycles, of which the housing and subprime mortgage boom and bust is the latest example.

I will address three main points:

• The severe mortgage and housing industry problems we are experiencing can best be understood as the deflation of a classic asset bubble, the asset in this case of course being houses and condominiums. The boom is always marked by rapid and unsustainable price increases, inducing and fueled by a credit overexpansion; the inevitable bust follows with defaults, losses and a credit contraction.

• Because residential mortgages represent so large a credit market and component of total debt, and residential real estate such a huge asset class and component of household wealth, while homebuilding and its many related industries are an important element of GDP, and because a credit contraction hurts growth generally, the negative effects of the deflating bubble on macroeconomic growth are sizeable and significant.

• Possible political responses to the problems fall into two categories:

First, in addition to monetary policy, temporary programs to bridge and partially offset the impact of the bust, and to reduce the risk of a housing sector debt deflation. I will consider some of these, including using the use of the FHA and Fannie Mae and Freddie Mac as sources for refinancing subprime mortgages in imminent or actual default.

Second, long term steps to fundamentally improve the functioning of the mortgage market. I will repeat a very simple but powerful proposal: a one-page mortgage disclosure which tells borrowers what they really need to know about their mortgage loan in a clear and straightforward way. This will both better equip borrowers to protect themselves and make the mortgage market more efficient.

1. Subprime Mortgages as a Classic Boom and Bust

Needless to say, the unsustainable expansion of subprime mortgage credit and the great American house price inflation of the new 21st century are both over. Former enthusiasm at rising home ownership rates and financial innovation (now a little hard to remember) have been replaced by large financial losses, a credit market panic, layoffs, closing or bankruptcy of scores of subprime lenders, accelerating delinquencies and foreclosures, a deep recession in the homebuilding industry, tightening or disappearing liquidity, and of course, recriminations.

It is not necessary to recite the details. Typical estimates of the credit losses involved are about $100 billion. This does not count losses in market value of mortgage securities or the macroeconomic effects. Rising foreclosures are also an obvious social and political issue.

All these elements display the classic patterns of recurring credit overexpansions and their aftermath, as colorfully discussed by students of financial cycles like Charles Kindleberger, Walter Bagehot and Hyman Minsky. Such expansions are always based on optimism and the euphoric belief in the ever-rising price of some asset class—in this case, houses and condominiums. This appears to offer a surefire

way for lenders, investors, borrowers and speculators to make money, and indeed they do, for a while. As long as prices always rise, everyone can be a winner.

A good example of such thinking was the 2005 book by an expert housing economist entitled, Are You Missing the Real Estate Boom? Why the Boom Will Not Bust and Why Property Values Will Continue to Climb Through the Rest of the Decade.

This time, we had several years of remarkably rising house prices—the greatest house price inflation ever, according to our distinguished colleague on the panel, Professor Shiller, who has certainly been insightful in this matter. The total value of residential real estate about doubled between 1999 and 2006, increasing by $10 trillion. The great price inflation stimulated the lenders, the investors, the borrowers and the speculators. If the price of an asset is always rising, the risk of loans seems less and less, even as the risk is in fact increasing, and more leverage always seems better.

Of course, we know what always happens next: the increased risk comes home to roost, prices fall, and there is a hangover of defaults, failures, dispossession of unwise or unlucky borrowers, revelations of fraud and swindles, and the search for the guilty. You would think we would learn, but we don't. Then come late-cycle political reactions.

With regard to the last point, since 1970 we have had the Emergency Home Finance Act of 1970, the Emergency Housing Act of 1975, the Emergency Housing Assistance Act of 1983, and the Emergency Housing Assistance Act of 1988. (I do not count the Hurricane Katrina Emergency Housing Act of 2005, a special case.) Kindleberger estimated that over the centuries, financial crises recur about once a decade on average, and so apparently do emergency housing acts. It seems probable to me that, given the current problems, this fall will bring an emergency housing act of 2007.

A year ago, it was common to say that while house prices would periodically fall on a regional basis, they could not on a national basis, because that had not happened in the large U.S. market since the Great Depression. Well, now house prices are falling on a national basis, as measured by the S&P/Case-Shiller national index.

House sales have dropped steeply, and for-sale inventories of new and existing houses and condominiums are high. At the same time, rising mortgage delinquencies and defaults, along with the collapse of funding through securitization, have caused lenders to drop subprime products or exit the business altogether and generally raise credit standards. This has sharply reduced mortgage credit availability and thus housing demand.

With excess supply and falling demand, it is not difficult to arrive at a forecast of further drops in house prices. The recent Goldman Sachs housing forecast, pointing out "substantial excess supply" and that "credit is being rationed," projects that average house prices will fall 7% a year through 2008. This is along with projected falling home sales and housing starts.

Professor Shiller has suggested that this cycle could see "more than a 15% real drop in national home price indicies." Certainly a return to long term trends in house values would imply a significant adjustment.

The June 30, 2007 National Delinquency Survey of the Mortgage Bankers Association reports a total of 1,090,300 seriously delinquent mortgages. Serious delinquency means loans 90 days or more past due plus loans in foreclosure. Of the total, 575,200 are subprime loans. Thus subprime mortgages, which represent about 14% of mortgage loans, are 53% of serious delinquencies.

The survey reports 618,900 loans in foreclosure, of which 342,500 or 55% are subprime.

The ratio of subprime loans in foreclosure peaked in 2002 at about 9%, compared to its current level of 5.5%. Seriously delinquent subprime loans peaked during 2002 at 11.9%, compared to the current 9.3%. These ratios at this point are not as bad as five years ago, but they are still rising.

A systematic regularity of mortgage finance is that adjustable rate loans have higher defaults and losses than fixed rate loans within each quality class. Thus we may array the June 30, 2007 serious delinquency ratios as follows:

Prime fixed	0.67%
Prime ARMs	2.02%
FHA fixed	4.76%
FHA ARMs	6.95%
Subprime fixed	5.84%
Subprime ARMs	12.40%

The particular problem of subprime ARMs leaps out of the numbers. Also notice that FHA and subprime serious delinquency ratios for fixed rate loans are not radically different. The FHA is predominately a fixed rate lender, whereas subprime is about 53% ARMs. The total range is remarkable: the subprime ARM serious delinquency ratio is over 18 times that of prime fixed rate loans.

A central problem is that during the boom the subprime market got very much larger than it used to be. In the years of credit overexpansion, it grew to $1.3 trillion in outstanding loans, up over 8 times from its $150 billion in 2000. So the financial and political impact of the subprime level of delinquency and foreclosure is much greater.

2. Macroeconomic Effects

The American residential mortgage market is the biggest credit market in the world, with about $10 trillion in outstanding loans. Residential real estate is a huge asset class, with an aggregate value of about $21 trillion, and is of course the single largest component of the wealth of most households. A 15% average house price decline would mean a more than $3 trillion loss of wealth for U.S. households, which would be especially painful for those who are highly leveraged. It would certainly put a crimp in getting cash to spend through cash-out refinancing and home equity loans.

The deflation of a bubble centered on such large stocks of debt and assets always causes serious macroeconomic drag. Housing busts have typically translated into recessions. It goes without saying that the current bust has already been and will continue to be a significant negative for economic growth. Moody's recently forecast that the "unexpectedly steep and persistent downturn" in the mortgage and housing sector would last until 2009.

At an AEI conference last March, my colleague Desmond Lachman predicted that the economic impact of the housing problems would be much worse than was generally being said at the time, including what he considered the overoptimistic view of the Federal Reserve, and that they would become a major political issue. These were certainly good calls.

At the beginning of September, National Bureau of Economic Research President Martin Feldstein incisively reviewed the interrelated series of problems stemming from the deflating housing and mortgage bubble and pointed out "a sharp decline in home prices and the related fall in home building that could lead to an economy-wide recession," "the potential for a substantial decline in consumption," and "a potentially serious decline in aggregate demand." Note these are all stated as risks with the objective of encouraging the Federal Reserve to ease credit.

Aggregate consumption has been positive every quarter since 1991, but large losses from the deflating housing and mortgage bubble have already happened and must unavoidably work their way through the financial and economic system. Reductions in household wealth and tighter credit constraints on consumers might be enough to turn consumption growth negative.

A week and a half ago, my colleague John Makin, reviewing these factors, concluded that they "will, very probably, produce negative growth by the end of 2007 or early in 2008." The appearance of the slowdown, he wrote, "will hopefully get the Fed on an easing path soon enough to escape with a mild recession." This would be, he suggested, "the price we pay" for the bubble.

3. Policy Responses

There are two categories of possible responses: temporary programs to bridge the bust, and fundamental, long term improvements.

A. Temporary Programs

The Federal Reserve and other central banks have already provided significant amount of liquidity support to the panicky international credit markets, which are suffering from not knowing who is in trouble from leveraged speculations in subprime securities and from great uncertainty about what such securities are worth. Many voices are calling on the Fed to lower the fed funds rate and the expectation is that they will have taken a first step by the time of this hearing. Lower short term rates make it cheaper to carry leveraged positions in securities unable to be sold at prices acceptable to the seller and help ease the panic.

In any case, panics are by nature temporary and the liquidity crisis won't last forever. Large losses will be taken, who is broke and who is solvent sorted out, risks reassessed, models rewritten, and revised clearing prices discovered. Market actors will get back into business trading with and lending to each other again. Liquidity will return for markets in prime instruments. An astute long-time observer of finance, Don Shackelford, has predicted that "the panic about credit markets will be a memory by Thanksgiving."

He may well be right; however, the severe problems with subprime mortgages and securities made out of them, related defaults and foreclosures, and falling house prices will continue long past then.

Falling house prices tend to cause higher mortgage defaults, especially if loans were made, as they were, with small or no down payments, and especially if a substantial proportion of loans were to speculative buyers, as they were. So the U.S. appears to risk a process in which defaults on mortgages, and securities made of mortgages, cause tightening credit as well as houses dumped on the market through foreclosure, tight credit reduces demand, which induces falling house prices, which cause more defaults, more credit tightening, lower house prices. . . . In other words, there is risk of a self-reinforcing downward cycle, or debt deflation, in the housing sector.

To try to bridge the bust and ameliorate the downward cycle is a reasonable project with much historical precedent. History is clear that governments always intervene in some fashion.

But what fashion makes sense? Intervention should be temporary, inhibit as little as possible personal choice and the long run innovation and efficiency of the market, and should not bail out careless lenders and investors or speculative borrowers.

To help bridge the bust with an appropriate means of refinancing adjustable rate subprime mortgages is a project worth pursuing. A recent survey of mortgage brokers found that of home purchase closings they had scheduled for August, 2007, 56% of subprime homebuyers had canceled closings. Of subprime borrowers trying to refinance adjustable rate mortgages with resetting interest rates, the survey found that 64% of the subprime homeowners were unable to do so.

President Bush, numerous members of Congress, and the FHA itself have suggested using the FHA as the means to create a refinancing capability for subprime mortgages. This makes sense because the FHA itself is, and has been since its creation in 1934, a subprime mortgage lending institution. Of course, they didn't call it that, but historically if you couldn't qualify for a prime loan, you went to the FHA.

We noted above that the latest MBA survey shows that serious delinquencies for fixed rate FHA and subprime loans are similar. So are total past due loans: 14.54% of subprime loans are past due, as are 12.40% of FHA loans. The difference is in the foreclosure inventory: although both are far over the prime foreclosure ratio of 0.59%, the 5.52% for subprime is two and a half times the 2.15% for the FHA. The FHA, being itself the principal credit risk taker, logically has more ability to practice forbearance and loss mitigation.

But with falling house prices, the amount the FHA could responsibly refinance is liable to be less than the outstanding principal owed on the subprime mortgage. Here the owners of these mortgages, typically investors in structured MBS issued by a securitization trust, need to take a loss for the difference. Investors in such speculative instruments should not be bailed out, and the loss in economic value has occurred already: it is a matter of its becoming a realized haircut.

Here we run up against the complications of the laws, regulations and contracts governing mortgages in securitized form and the duties of the agents for the investors. The mortgage servicers who actually deal with the borrower, but are not themselves the owner of the mortgage, have the ability as agent to make loan modifications for loans in default or imminent default. But the standard of their fiduciary duty is to maximize the returns to the bondholders of the securitized mortgage trust.

To accept less than full repayment in settlement of a troubled loan from the proceeds of an FHA refinancing, the mortgage servicer would have to be quite confident that this was a clearly better outcome for the bondholders than proceeding to foreclosure. Fortunately, from this particular point of view, foreclosure is an extremely expensive process for the investors.

Thus I believe that a special program in which the FHA could refinance 97% of the current value of the house, and the investors would accept a loss on any difference between that and the principal owed, would be an alternative distinctly preferable to foreclosure for the investors, as well as obviously so for the borrowers. This would allow the borrowers to go forward with a small positive equity in the property and a loan of more appropriate size. That such a program would be accompanied by risk-based FHA insurance premiums seems reasonable to me.

Putting this in the context of the evolution of the mortgage market, the Mortgage Bankers Association has reported that subprime mortgages grew from 2.4% to 13.7% of total mortgage loans between 2000 and 2006. But the proportion of prime loans also increased, from 72.6% to 76.6%. What went down? It was the market share of the government's FHA (and much smaller VA) programs, which fell from 25.2% to only 9.7%. The combined share of subprime plus FHA-VA stayed more or

less the same, but within that, subprime took a lot of market share away from the government alternatives.

That was during the boom. Now in the bust, the FHA, the creation of the great bust of the 1930s, would take that market share back.

Let me turn briefly to Fannie Mae and Freddie Mac.

Two proposals regarding Fannie and Freddie are relevant as temporary bridge programs: to increase their conforming loan limits and to relax their mortgage portfolio caps. Both of these represent great profit opportunities for Fannie and Freddie, and it is the fiduciary duty of their managements to their shareholders to push these ideas as strongly as possible.

I do not favor an increase in the conforming loan limit, because it would principally operate to expand the government's credit into the prime jumbo loan market and, as discussed above, I believe the markets for prime assets will fairly quickly recover from panic on their own.

Relaxing the portfolio caps is more interesting and capable of being focused on the key issue of refinancing subprime ARMs. As odd as it may seem coming from an AEI fellow, I do favor granting Fannie and Freddie a special increased mortgage portfolio authorization, strictly limited, however, to a segregated portfolio solely devoted to refinancing subprime ARMs. Such a special authorization might be for $100 billion each, and include the ability to purchase FHA-insured subprime ARM refinancings. FHA loans would then have both a Ginnie Mae and a Fannie-Freddie funding channel.

As a last point, actual purchase of subprime mortgages by a special government fund has sometimes been proposed. A very interesting historical example of such a program was the Home Owners' Loan Corporation, created by the Home Owners' Loan Act of 1933. The HOLA bought defaulted mortgages from lenders in exchange for its own bonds, but would refinance not more than 80% of what it considered the long term value of the property. It ended up purchasing 20% of all the mortgages in the nation, from which we can see that our problems, however serious, don't even begin to approach those of the 1930s.

B. A Simple Proposal for Fundamental Improvement of the Mortgage Market

The mortgage market, like all financial markets, is constantly experimenting with how much risk there should be, how risk is distributed, and how it trades off with financial success or failure. The subprime mortgage boom obviously overshot on risk creation; it and the economy are now paying the price. "Risk," as an old boss of mine used to say, "is the price you never thought you'd have to pay."

However, nothing is more apparent than that we want the long term growth, innovation and economic well being for ordinary people that only market experimentation can create, even though this involves boom and bust cycles which can be avoided only in hindsight.

Should ordinary people be free to take a risk in order to own a home, if they want to? Yes, provided they understand what they are getting into. (This is a pretty modest risk, to say the least, compared to those our immigrant and pioneer ancestors took!)

Should lenders be able to make risky loans to people with poor credit records, if they want to? Yes, provided they tell borrowers the truth about what the loan obligation involves in a straightforward, clear way.

A market economy based on voluntary exchange and contracts requires that the parties understand the contracts they are entering into. A good mortgage finance system requires that the borrowers understand how the loan will work and how much of their income it will demand.

Nothing is more clear than that the current American mortgage system does not achieve this. Rather it provides an intimidating experience of being overwhelmed and befuddled by a huge stack of documents in confusing language and small type presented to us for signature at a mortgage closing. This complexity results from legal and compliance requirements; ironically, past regulatory attempts to insure full disclosure have made the problem worse. This is because they attempt full, rather than relevant, disclosure.

Trying to describe 100% of the details in legalese and bureaucratese results in essentially zero actual information transfer to the borrower. The FTC recently completed a very instructive study of standard mortgage loan disclosure documents, concluding that "both prime and subprime borrowers failed to understand key loan terms."

Among the remarkable specifics, they found that:

"About a third could not identify the interest rate"

"Half could not correctly identify the loan amount"

"Two-thirds did not recognize that they would be charged a prepayment penalty" and

"Nearly nine-tenths could not identify the total amount of up-front charges."

As the events of the current bust have demonstrated, this problem is especially important in, though by no means limited to, the subprime mortgage market.

To have informed borrowers who can better protect themselves, the key information must be simply stated and clear, in regular-sized type, and presented from the perspective of what commitments the borrower is making and what that means relative to household income. The borrowers can then "underwrite themselves" for the loan. They have a natural incentive to do so—we need to ensure they have the relevant intelligible, practical information.

I have previously proposed (in House testimony) a one-page form, "Basic Facts About Your Mortgage Loan," along with brief explanations of the mortgage vocabulary and some avuncular advice for borrowers, which borrowers would have to receive from the lender well before the closing. A copy of the proposed form accompanies this testimony.

I believe its mandatory use would help achieve the required clarity, make borrowers better able to protect themselves by understanding what the mortgage really means to them, and at the same time would promote a more efficient mortgage finance system. This seems to me a completely bipartisan idea, which should be implemented as a fundamental reform, whatever else is done or not done.

Thank you again for the opportunity to share these views.

Accompanying attachment: One-Page Form ("Basic Facts About Your Mortgage Loan")

THE BASIC FACTS ABOUT YOUR MORTGAGE LOAN

Borrower: _____ Property address: _____
_____ _____
_____

Lender: _____

Amount of loan: $ _____, which is _____ % of the property's appraised value.
Your loan is for _____ years.
The type of loan you have: _____

Your beginning interest rate is _____ %. This rate is good for _____ months/years. The rate and your payment can go higher on _____ and each _____ months after that.

Today's estimate of how high the rate will go, called the fully indexed rate, is _____ %.
The maximum possible rate on your loan is _____%.

THIS LOAN IS BASED ON YOUR MONTHLY INCOME OF $ _____ .

Your beginning rate = a monthly loan payment of $_____ = _____ % of your income.
-including taxes and insurance this is about $_____ = _____ % of your income.

The fully-indexed rate = a loan payment of $_____ = _____ % of your income.
-including taxes and insurance this is about $_____ = _____ % of your income.*
*This is called your fully indexed housing expense ratio.

Special factors you must be aware of:

-A prepayment fee of _____ must be paid if _____ .
-A "balloon payment" of $ _____ to pay off your loan will be due on _____ .
-You do/do not have a "payment option" loan. If you do, make sure you really understand what this means. Start with the definition on page 3.

Total "points" plus estimated other costs and fees due at closing are $ _____ .

FOR QUESTIONS CONTACT: Name: _____
Phone: _____ e-mail: _____

See definitions of underlined terms and guidelines on pages 2–3.
DO NOT SIGN THIS IF YOU DON'T UNDERSTAND IT!

_____
Borrower Date

_____ _____
Authorized Signer of Lender Date Borrower Date

THE BASIC FACTS ABOUT YOUR MORTGAGE LOAN

This form gives you the basic facts, but some mortgage forms may use terms not listed here. For a good, borrower-friendly information source, try the Mortgage Professor online (www.mtgprofessor.com), which includes detailed explanations of the technical mortgage terms in its glossary and much other helpful information.

DEFINITIONS AND GUIDELINES USED IN THIS FORM

The *appraised value* is what a professional appraisal estimates the house could be sold for in today's market.

The *type of loan* determines whether and by how much your interest rate can increase. If it can, your monthly payments will also increase—sometimes by a lot. For example, in a thirty-year fixed rate loan, the interest rate is always the same. In a one-year ARM, it will change every year. Other kinds of loans have various patterns, but the interest rate may go up a lot. Make sure you understand what type of loan you're getting.

The *beginning interest rate* is the interest you are paying at the beginning of the loan. Especially if it is a low introductory or "teaser" rate, it is the rate which you will hear the most about from ads and salespeople. But how long is it good for and when will rates increase? In many types of loans, the rate will go up by a lot. You need to know.

The *fully-indexed rate* is an essential indicator of what will happen to your interest rate and your monthly payments. It is today's estimate of how high the interest rate on an adjustable rate mortgage will go. It is calculated by taking a defined "index rate" and adding a certain number of percentage points, called the "margin." For example, if your formula is the one-year Treasury rate plus 3 percent, and today the one-year Treasury rate is 5 percent, your fully-indexed rate is 5% + 3% = 8%. At the time the loan is being made, the fully indexed rate will *always* be higher than a beginning "teaser" rate.

The index rates are public, published rates, so you can study their history to see how much they change over time. If the index rate stays the same as today, the rate on your loan will automatically rise to the fully indexed rate over time. Since the index rate itself can go up and down, you cannot be sure what the future adjustable rate will be. In any case, you must *make sure you can afford the fully-indexed rate*, not just the beginning rate, which is often called a "teaser" rate for good reason.

The *maximum possible rate* is the highest your interest rate can go. Most loans with adjustable rates have a defined maximum rate or "lifetime cap." You need to think about what it would take to make your interest rate go this high. How likely do you think that is?

Your *monthly income* means your gross, pre-tax income per month for your household. This should be an amount which you can most probably sustain over many years. Make sure the monthly income shown on this form is correct!

Your *monthly payment including taxes and insurance* is the amount you must pay every month for interest, repayment of loan principal, house insurance premiums, and property taxes. Expressed as a percent of your monthly income, this is called your housing expense ratio. Over time, in addition to any possible increases in your interest rate and how fast you must repay principal, your insurance premiums and property taxes will tend to increase. Of course, your monthly income may also increase. How much do you expect it to?

Your *fully-indexed housing expense ratio* is a key measure of whether you can afford this loan. It is the percent of your monthly income it will take to pay interest at the fully-indexed rate, plus repayment of principal, house insurance, and property taxes. The time-tested market standard for this ratio is 28 percent; the greater your ratio is, the riskier the loan is for you.

A *prepayment fee* is an additional fee imposed by the lender if you pay your loan off early. Most mortgages in America have no prepayment fee. If yours does, make sure you understand how it would work before you sign this form.

A *"balloon payment"* means that a large repayment of loan principal is due at the end of the loan. For example, a seven-year balloon means that the whole remaining loan principal, a very large amount, must be paid at the end of the seventh year. This almost always means that you have to get a new loan to make the balloon payment.

A *"payment option" loan* means that in the years immediately after securing a mortgage loan, you can pay even less than the interest you are being charged. The unpaid interest is added to your loan, so the amount you owe gets bigger. This is called "negative amortization." The very low payments in early years create the risk of very large increases in your monthly payment later. Payment option loans are

typically advertised using only the very low beginning or "teaser" required payment, which is less than the interest rate. You absolutely need to know four things: (1) How long is the beginning payment good for? (2) What happens then? (3) How much is added to my loan if I pay the minimum rate? (4) What is the fully-indexed rate?

"Points" are a fee the borrower pays the lender at closing, expressed as a percent of the loan. For example, two points mean you will pay an upfront fee equal to 2 percent of the loan. In addition, mortgages usually involve a number of *other costs and fees* which must be paid at closing.

Closing is when the loan is actually made and all the documents are signed.

The *For Questions Contact* section gives you the name, phone number, and e-mail address of someone specifically assigned by your lender to answer your questions and explain the complications of mortgage loans. Don't be shy: contact this person if you have any questions.

Finally, *do not sign this form if you do not understand it.* You are committing yourself to pay large amounts of money over years to come and pledging your house as collateral so the lender can take it if you don't pay. Ask questions until you are sure you know what your commitments really are and how they compare to your income. Until then, do not sign.

JOINT ECONOMIC COMMITTEE
SENATE REPUBLICANS

SENATOR SAM BROWNBACK, SENIOR REPUBLICAN SENATOR

I would like to thank Chairman Schumer for scheduling today's hearing and thank the panel of witnesses for sharing their views on recent developments in mortgage markets, financial markets, and the broader economy.

We have seen continuing signs of weakness in our Nation's housing markets and increasing delinquencies and foreclosures on mortgages, particularly in the area of subprime mortgages with adjustable rates. Looking forward, a large number of homeowners with adjustable rate mortgages will be facing resets during the remainder of this year and, at least, through next year. Difficulties in the mortgage markets have spilled over into markets for mortgage-backed securities. More generally, this has translated into increased risk aversion in global financial markets as market participants face uncertainty about who is exposed to risk from the subprime mortgage market and how much exposure counterparties may have.

It is particularly instructive to look at the ongoing signs of difficulties in mortgage and financial markets to assess what needs to be done to prevent future fraudulent mortgage lending *and* borrowing practices that may have occurred in the past. I am also interested in hearing testimony from our panel of witnesses as to their views on the broader economic implications of continued weakness in the housing and mortgage markets as well as the present uncertainties in broader financial markets.

As we consider various policy options to address current difficulties, I offer a few principles that we should keep in mind:

First, policies that involve federally-guided relief to homeowners on their mortgage debts inherently run the risk of introducing moral hazard into future mortgage transactions. To the extent that anything we do constitutes a bailout, it must be recognized that such policies can lead to reckless future behavior. If borrowers and lenders are led to believe that they may not have to carry the full burden of possible future losses because the government might step in to bail them out, then those people will become more inclined to take on greater risk than they otherwise would. This should be avoided.

Second, to the extent that we consider stricter regulations on mortgages, we have to walk a fine line. Regulators in the mortgage market must be obliged to prevent fraud and abusive lending. At the same time, regulators must tread carefully so as not to suppress responsible lending or eliminate refinancing opportunities for existing subprime borrowers and new financing opportunities for prospective subprime borrowers through overly-stringent regulations. The expansion of subprime mortgages has led to record homeownership that has been significantly driven by increased homeownership among minorities.

Of course, in the current environment, we face difficulties. This is especially so in trying to separate victims from speculators and liars. There are homeowners who truly were victimized by fraudulent and misleading lender practices. It is hard not to feel sympathy for the plight of those victims and we need to act to help those

people as well as to prevent future victims. At the same time, we must acknowledge that there were people who were recklessly taking out mortgage loans (sometimes through misrepresentation of their actual financial conditions) either to obtain more housing than they could reasonably afford or as part of a speculative, get rich quick scheme. There is some suggestion on the part of the Mortgage Bankers Association that the latter has played a significant role in subprime defaults in several states. Those people—those who acted imprudently with the knowledge that they were doing so, those who were dishonest, and those who engaged in reckless speculative activity—should bear the full responsibility of their obligations.

I look forward to the testimony of our panelists as we examine how best to work through the recent difficulties we have observed in housing, mortgage, and financial markets.

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