

Improving Financial Stability

Testimony before the Congressional Oversight Panel

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We are in the midst of an economic contraction that is currently mirroring the worst months of the 1974 recession, one of the sharpest post-World War II periods of decline for our country. While the current recession started at the end of 2007, the economy effectively fell off a cliff in late September after the failure of Lehman Brothers and the subsequent warnings of U.S. leaders that we were on the verge of a financial panic. In our system of government, these public warnings were necessary to build support for funding a broad emergency program, in this case the Troubled Assets Relief Program. However, the creation of the TARP proved insufficient by itself, and it was not until the Treasury added capital injections to the original plan and until the FDIC agreed to temporarily guarantee certain bank debt and provide unlimited deposit insurance on transaction accounts that some modicum of financial stability was achieved.

It has been impossible to completely stop the deterioration because the economy is deleveraging, and in fact needs to shed leverage after a decade of excessive borrowing. Credit market liabilities in the U.S. soared from 250 percent of GDP in 1997 to 350 percent of GDP in 2007, reaching over \$50 trillion. Over this time the economy has suffered from the rapid deflation of two asset bubbles. While both consumers and the financial sector still need to reduce their debt burden, a central goal of the emergency policies has been to slow the pace of deleveraging to minimize the negative feedback loops that occur during a sharp economic downturn. So far troubled banks have received help restoring their capital and protecting their liabilities. But bad assets still remain on their balance sheets and are a drag on their ability to function. Immediate future actions should consider ways to remove the bad assets, either through the creation of a “bad” bank as has been done in other countries, or through direct purchases of these assets. I’ll note that the private sector is starting to make some progress in establishing a market for certain types of troubled assets. Other actions should focus on making a concerted effort to stabilize the housing sector, the source of much of the pain.

The goals of longer-term reform strategies are quite different and should focus on preventing excessive leverage from happening in the next cycle. In thinking about reform of the regulatory structure, it is imperative to consider the proper role of monetary policy as well. I will describe in some detail where I believe policy across government failed in the past. I will then conclude with three recommendations, all centered on preventing excessive leverage from building up. The first recommendation is for the Federal Reserve to take a more active role in preventing asset and credit bubbles from forming in the first place, as I believe is mandated

under the Federal Reserve Act. The second recommendation is to shift housing policy, when possible, from subsidizing leverage to promoting equity. The third recommendation is to support binding limits on the amount of leverage that is permitted by banks and institutions that function as banks.

What Happened

From 1984 to 2006, the economic performance of countries around the world, both in terms of the stability of growth and inflation, improved substantially compared with the 1970s.¹ Economists deemed this period of relative tranquility the “Great Moderation.” The peak for the Great Moderation can be pegged to January 2007, just before HSBC’s mortgage problems were revealed and New Century Financial buckled, a time when complacency was at an all time high. Credit spreads around the world had collapsed – even spreads on Ecuadorian bonds barely budged when the President hinted at a default in late 2006. Credit was more than just acceptable, it had become fashionable.

There was a belief that monetary policy had finally learned from the past. Policymakers from the 1970s had overestimated their ability to control output and underestimated their ability to *cause* inflation. But now that central bankers had learned from that experience, another “end of history” moment had arrived where everyone could relax, or at least prosper. Little did central bankers know that they were making similar-sized errors. Reduced volatility had meant easier planning, reduced hedging costs, and reduced uncertainty in the short run. But there was a flip side; perhaps the biggest asset and credit bubble in history was being created.

After peaking in value on October 3, 2007, the value of global equities was cut in half from \$62 trillion to \$31 trillion one year later, a global stock market crash not seen since the 1929-1932 decline. Over the same period, credit spreads have soared. The spread between emerging market sovereign debt and U.S. government debt has risen from a low 1.50 percent in June of 2007 to 8.65 percent in October 2008. Most of the damage in markets occurred after Lehman Brothers, a financial institution that had been around for 150 years, failed. In retrospect, Lehman Brothers was too big to fail and policymakers did not realize it at the time. The events that unfolded since then have now called into question the success of the last 25 years. This is an extraordinary crash, and one that is no way consistent with a placid label like the Great Moderation. Even a cursory look at the U.S. stock market shows that in the last thirteen years we have been in a boom/bust cycle of rapidly increasing and then deflating asset prices, hardly a period of moderation. The S&P 500 rose from a value of 500 in 1995 to a remarkable 1550 in 2000, only to fall to below 800 by 2002. It then rose back to its previous high of 1550 in 2007 before collapsing back to 800 again in 2008.

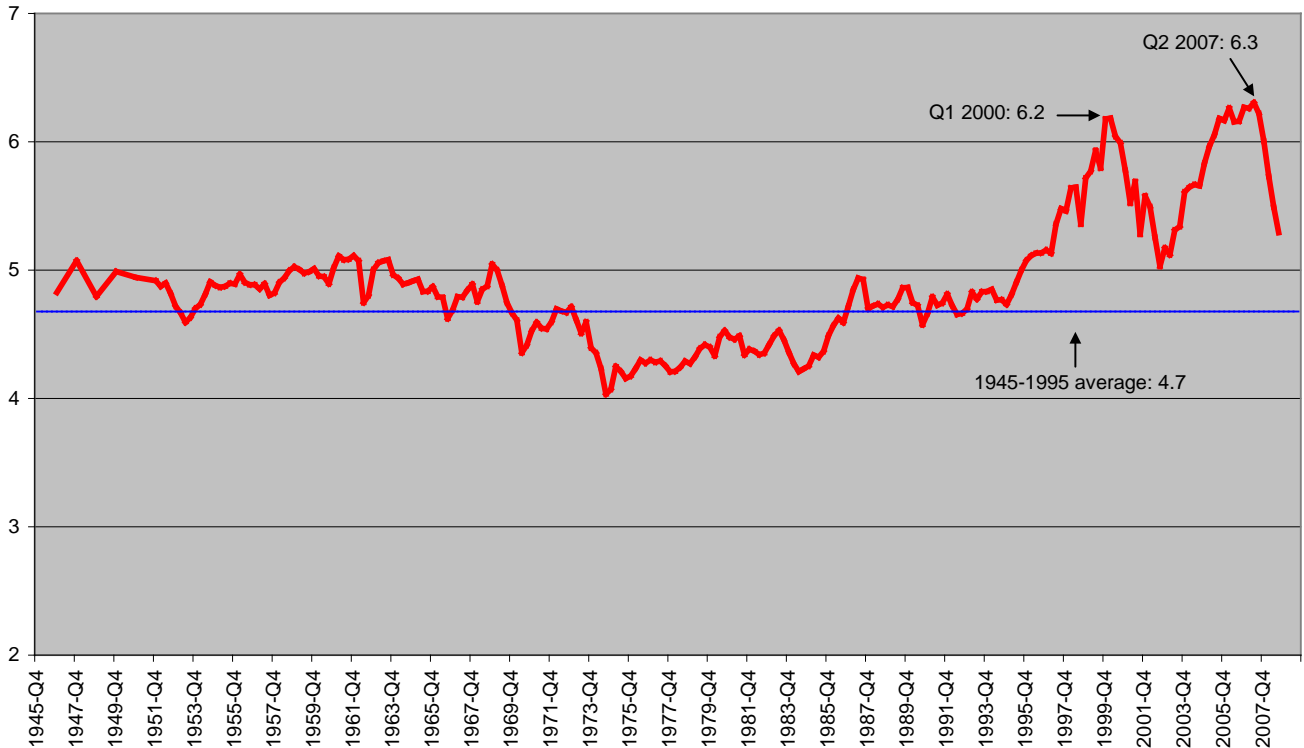
¹ See for example “The Great Moderation,” Governor Ben Bernanke, February 20, 2004.

The Fundamental Mistake of Central Banks

When history takes stock of this financial panic, much blame will be allocated to central bankers who believed that asset prices could be in large part ignored when making policy decisions. There were a number of components to this critical belief, all of them wrong. One component was the belief that an appropriate judgment about the level of asset prices cannot be determined in advance, or at least not one that is better than the market's. But, practically every variable a central bank uses to formulate monetary policy is unknowable, including its forecast for GDP and inflation. Former Federal Reserve staffer Steve Cecchetti has argued that assessing a misalignment in asset prices is not any more difficult than assessing a key input like the output gap (in simple terms, the output gap is the difference between actual and trend growth).² In fact, the output gap is routinely used by central banks to base policy on, even though it is impossible to observe in real life ever. So assessing assets prices, at least when they make extreme moves, is probably easier than other key judgments a central bank makes on a regular basis. One simple way to do this is to look at the historic ratio of net worth to disposable personal income in the United States, as shown in the chart below. The value of assets (and net worth) is ultimately dependent on the income of people who purchase these assets. For most of recorded history, this ratio was between four and five. There are two sharp deviations, the technology bubble in late 1990s and the more recent housing bubble. These were hardly undetectable deviations.

² Cecchetti, Stephen, Genberg, Hans, and Wadhvani, Sushil, "Asset Prices in a Flexible Inflation Targeting Framework," 2002.

Ratio of U.S. Household Net Worth to Disposable Personal Income



Source: Federal Reserve Flow of Funds, The Lindsey Group

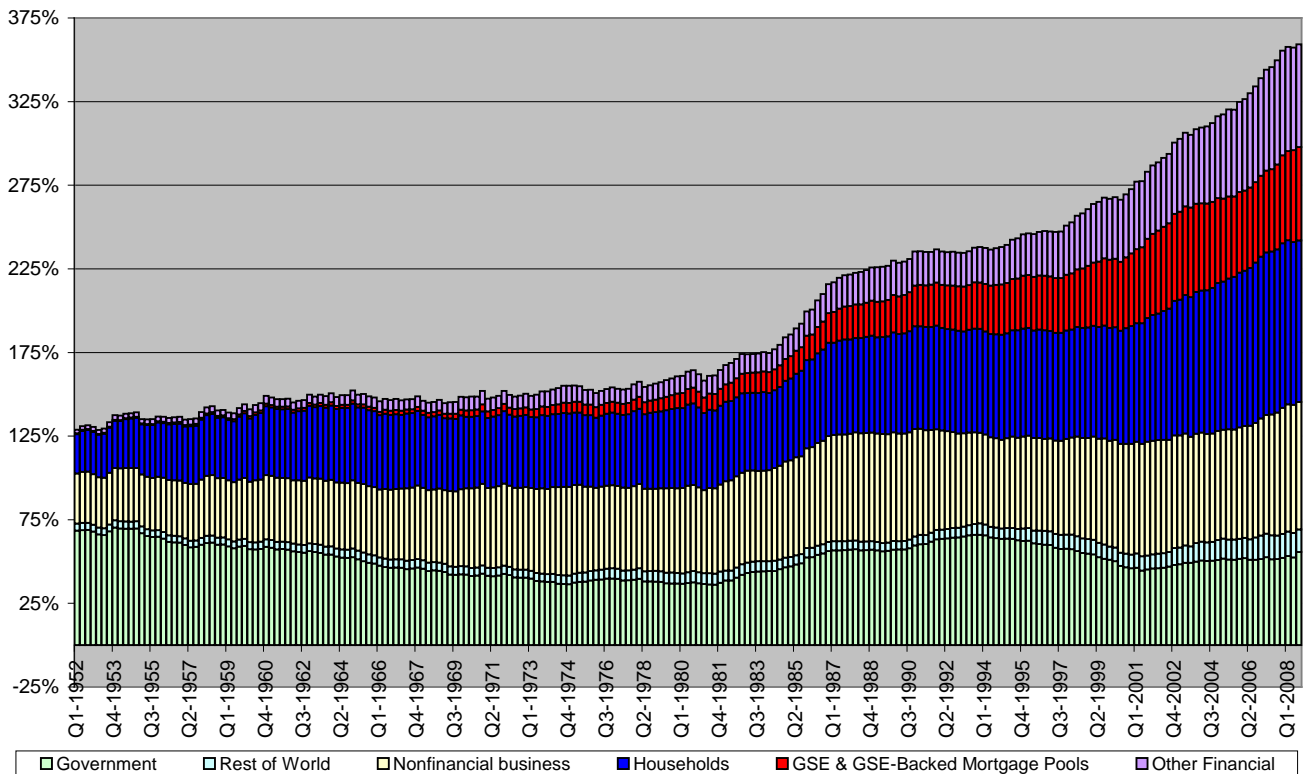
Not only did central bankers believe that asset-bubbles were undetectable, Alan Greenspan argued strenuously that the best policy was to let them pop and then mitigate the damage by cutting rates. This created an asymmetric bias towards easy rates, a bias that traders referred to as the “Greenspan Put.” Rising asset prices would not be resisted and falling asset prices would be cushioned with a vigorous policy response. This bias toward easy monetary policy also created a bias toward overvalued asset prices that would eventually collapse under their own weight.

Attention from the emerging U.S. stock market bubble was diverted by the 1997 Asian financial crisis and the associated Russian debt default of 1998, which sunk the mammoth hedge fund Long Term Capital Management. These events are directly relevant to the most credible argument put forth in defense of the Federal Reserve’s policy on asset prices, and that is the notion of the Global Savings Glut. During the mid 1990s, a number of Asian economies like South Korea and Thailand were growing so fast that they started overheating. This overheating led to a rise in inflation and in the real value of their currencies. As their currencies appreciated, the countries started to run current account deficits that ultimately became unsustainable. Finally, in July 1997, the Thai Bhat came unpegged, setting off a global currency crisis that

reverberated for over a year. The result was that these nations developed a new conviction, aided by markets, to run current account surpluses rather than deficits, joining traditional export powerhouses like Japan and Germany. Then in 2001, China joined the WTO and within a few years it was running a massive current account surplus as well.

By definition, current account surplus countries are savers that must be offset by current account deficit countries. Borrowing countries like the United States, the United Kingdom, Spain, and Australia ran enormous deficits at the same time, sucking in capital from around the world. Proponents of the Global Savings Glut theory, most prominently Chairman Bernanke, argue that this huge supply of capital led to lower global rates. Former Fed Chairman Greenspan noted that low rates were a global phenomenon, and that the Federal Reserve had little control over domestic long term rates in this environment. The low rates caused a global housing boom that was in no way a U.S.-specific event. Housing prices did in fact boom all over the world, with countries like Spain and Ireland experiencing price gains well in excess of the gains in America. Interestingly, the rise in the amount of credit market liabilities in the U.S. began to significantly outpace the rise in GDP starting in about 1997, at about the same time that the global savings glut started.

Credit Market Liabilities to GDP



Source: Federal Reserve Flow of Funds, The Lindsey Group

Still, policymakers in the U.S. did little to lean against the global winds. The rise in the stock market was celebrated even as the P/E ratio of the S&P rose to a staggering 44, three times its historic average. The failure of policymakers at the central bank and elsewhere to lean against a developing asset and credit bubble was their biggest mistake. While stocks were rising, American corporations took on enormous debt to invest in the “new” economy. Once the technology bubble was allowed to start, the boom bust cycle that has lasted over a decade was on its way.

All throughout this time, central bankers pointed out that inflation was low and stable. Another fundamental error of monetary experts was the emerging consensus of inflation targeting.³ Inflation targeting holds that central banks should target a specific numeric value of goods and services inflation, and that central banks should ignore asset prices except to the extent that they signal changes in future goods and services inflation. Among inflation targeters, a further consensus was reached that goods and services prices should always rise between zero and two percent. Deflation, or an outright fall in prices, was deemed especially dangerous, and for some good reasons. With prices falling, central banks lose the ability to reduce the real interest as much as they can when prices are rising. For instance, if deflation is running 2 percent a year and the nominal interest rate is zero, then the real rate is still a positive 2 percent and is difficult to lower because of the zero bound on the nominal rate. Deflation also increases the real value of debt, making it a dangerous condition for economies that are in trouble. But there was a weakness in the consensus argument that was underappreciated. Prices can fall for multiple reasons. “Bad” price falls occur when demand is weak or when the money supply (or velocity) is restricted. This is the type of deflation that happened at the onset of the Great Depression and is indeed a dangerous event. But, prices can also fall because of technological improvements. This is the type of deflation that happened in the late 1990s in the computer industry. If aggregate demand is strong and an economy is experiencing a positive and widespread fall in goods and services prices, monetary policymakers should not fear an overall inflation rate that falls below zero for a time. Equally important, they should not be comforted if inflation is merely low in such times. Inflation targeting was in part based on the belief that stable prices would increase the efficient allocation of resources. But during the technology bubble and during the housing bubble, a low inflation rate was not enough to stop a misallocation of capital.

By March of 2000, the stock market had finally peaked and it began a long slide, ultimately losing nearly half of its value by spring of 2002. In the U.S., \$5 trillion of wealth was lost and businesses were shedding costs by laying off workers and cutting investment spending. The economy contracted in third quarter of 2000, in the first quarter of 2001, and in the third

³ Greenspan was a noted exception to those who favored a public inflation-target. But achieving price stability as measured by the core PCE price index remained a central objective of his.

quarter of 2001. During this last quarter, the terrorist attacks on September 11 induced a shock to confidence. The Bush Administration adopted a strategy of propping up after-tax income as a way of supporting consumer spending. Business balance sheets were in rough shape and needed repair. A contraction by both business and the consumer at the same time could have resulted in a self-reinforcing downturn. As a result taxes were cut three times, in June of 2001, in March of 2002, and in May of 2003.

At the same time, the Federal Reserve was adopting an aggressive monetary response, with rates cut 11 times from January to December of 2001. With the economy slow to respond, the Federal Reserve cut sporadically in 2002 and 2003, until the Federal Funds rate was reduced to 1 percent. To spur the recovery and add predictability, the Federal Reserve choose a strategy of pre-announcing that rates would be kept low for “a considerable period.” And when the Fed finally started to raise rates in the summer of 2004, it choose to announce that the rate of increase would take place “at a measured pace.”

The popping of the technology bubble did start a more vigorous debate about whether a central bank should pay more attention to asset prices. In 2002, Michael Bordo and Olivier Jeanne directly questioned the Federal Reserve’s current view of asset prices, which they called benign neglect.⁴ During the same year, Chairman Greenspan argued that rise in the interest rate that would be needed to stop a bubble would be sizable and disruptive to the economy. But Bordo and Jeanne countered that during exceptional rises in asset prices, central bankers must tighten policy more than they otherwise would.

Bordo and Jeanne pointed out that financial crises are endogenous to monetary policy, and that they are dependent on an accommodative monetary policy in the first place. Given this, they argue, a preemptive restriction of monetary policy can be thought of as insurance against the risk of a credit crunch. In their view, estimating the risk of an asset price bubble and the proper level of insurance to take out must ultimately be based on judgment and cannot be estimated by any simple rule. The amount of proactive monetary policy depends on the amount of risk in the balance sheets of the private sector. During a boom period, the private sector accumulates a high level of debt. When asset prices fall during the bust phase, the collateral behind the debt shrinks, impeding the ability of the private sector to finance their operations. The link between private sector balance sheets and financial stability are inherently non-linear. Monetary policymakers have little choice but to make an assessment about both the cost and likelihood of an extreme event happening. Bordo and Jeanne end their 2002 paper with a very prophetic summary:

“The recent literature on monetary policy may give the impression of having reached an ‘end of history’ based on a consensus on the desirability of simple

⁴ Bordo, Michael D. and Jeanne, Olivier, “Monetary Policy and Asset Prices: Does “Benign Neglect” Make Sense?” October 2002.

rules, with the main remaining object of debate being the precise form of the golden policy rule. Like all ‘ends of history’, this one must have its Achilles heel, and we would surmise that it has to do with the relationship between monetary policy and financial stability.”

While the new debate was underway, the economy finally turned up. Nearly every macroeconomic variable started to improve in July of 2003, by coincidence or design at the exact time that the full marginal tax rate cuts took effect. Growth in the third quarter of 2003 was a powerful 7.5 percent. Proof of the expansion was the drop in the unemployment rate, which fell from 6.3 percent in June of 2003 to 4.4 percent in the fall of 2006. Conventional wisdom was that monetary policy could remain stimulative until slack in the labor market was removed -- commonly represented by an unemployment rate below 5 percent, which did not happen until late 2005. But, as it turns out, there was more to worry about than just labor market slack.

The Fed’s easy money policy was having an impact beyond employment. For three straight years, 2002, 2003, and 2004, the real Fed Funds rate (the overnight rate less a measure of inflation) was negative. Negative real interest rates are the equivalent of free money. A number of economists warned frequently that this easy money was causing dangerous distortions. Even when the Federal Reserve started to raise rates, it telegraphed that rates would only go up gradually. This predictability helped to lower forward bond volatility and future borrowing costs. As interest rate volatility declined, credit spreads tightened and FX volatility declined. Ironically, traders, pension funds, and insurance companies had to put on more risk to attain their yield targets.

The most obvious distortion of easy money was the rapid growth of credit. Banks and hedge funds could borrow at low overnight rates and invest in virtually any product in the world with a higher yield. Traders call this rate differential positive carry, and low rates in the U.S., and in Japan, encouraged investors around the world to put on carry trades. (When yachts start showing up with names like “Positive Carry,” the borrowing has probably got a bit excessive.) With the Federal Reserve pre-announcing its strategy, it was believed that there would be ample time to get out of carry trades when the time came. No skill or analysis was needed, and the best investors in the world started to be equaled or surpassed by those with lesser analytical abilities. The best measure of this trade is to look at a wide variety of credit spreads, or the difference in yield between safe and risky assets. Spreads from almost every credit class collapsed as investors played the yield curve. But so long as inflation in goods and services remained low, central bankers worried little about the credit creation associated with lower and lower rates.

Policymakers also advocated another belief that was bizarre: financial innovation could lower the aggregate amount of risk in the economy. For instance, in 2005 Alan Greenspan

offered this comment on the proliferation of derivatives (while also warning they should be used appropriately):

“The use of a growing array of derivatives and the related application of more-sophisticated approaches to measuring and managing risk are key factors underpinning the greater resilience of our largest financial institutions, which was so evident during the credit cycle of 2001-02 and which seems to have persisted. Derivatives have permitted the unbundling of financial risks. Because risks can be unbundled, individual financial instruments now can be analyzed in terms of their common underlying risk factors, and risks can be managed on a portfolio basis. Partly because of the proposed Basel II capital requirements, the sophisticated risk-management approaches that derivatives have facilitated are being employed more widely and systematically in the banking and financial services industries.”⁵

The rapid growth in the finance area, both in terms of products offered and profits collected, was widely seen as risk reducing. Not everyone saw it that way. Professor Joseph Mason of Drexel University aptly pointed out that “securitization can’t make risk go away, but it can cause it to get lost.”⁶ At its root, macroeconomic risk is derived from human behavior. Greed causes humans to overreach and fear causes them to pull back. Financial innovation can transfer risk to stronger hands, to put it in Wall Street parlance from the Great Depression days, but it does not make risk go away.

The best proof of this is the credit default swap, which grew from a non-existent market in the 1990s to a \$60 trillion market (gross notional value) at its peak in 2007. Credit default swaps are contracts that shift credit risk from a lender to a third party. Before credit default swaps, a buyer of General Motors bonds would receive a higher interest rate compared with a safe bond like a U.S. Treasury primarily because the General Motors bonds had a higher possibility of default. But with an active CDS market, an investor could buy the General Motors bond, receive the higher interest rate relative to a Treasury, and purchase default risk protection from a CDS. To make the trade work, the protection had to cost less than profit made on the spread, at least until this was arbitrated away. This innovation made all forms of credit risk much more attractive, especially in a period of falling default rates, and in this example, lowered the spread that General Motors had to pay on its bond. But note that this transaction did nothing to lower the probability that General Motors might default some day. And if GM defaulted, the economy would suffer the same economic loss. Perhaps it would fall to stronger hands, but with credit default swaps we aren’t completely sure. *The Economist* reported, based on data from CreditSights, that 32 percent of CDS protection in 2007 was sold by hedge funds.⁷ Hedge funds

⁵ “Risk Transfer and Financial Stability,” Alan Greenspan, May 5, 2005.

⁶ “Where Did the Risk Go? How Misapplied Bond Ratings Cause Mortgage Backed Securities and Collateralized Debt Obligation Market Disruptions,” Mason, Joseph, and Rosner, Joshua, Hudson Institute, February 3, 2007.

⁷ “Briefing: Credit Derivatives,” *the Economist*, November 8, 2008.

are not natural providers of insurance since they have no requirement to reserve against their commitments.

Not everyone saw this increase in financial activity so sanguinely. The Bank of International Settlements, which serves almost as a central bank to central banks, was an avid critic of the conventional wisdom. In a speech in 2004, BIS chief economist William White outlined how it could all go wrong:

“One possible set of interactions is the following:

- Lower policy rates enhance the search for yield;
- This leads to more risk-taking and under-pricing of risks;
- Safety nets enhance this trend, as does pressure for increased shareholder value;
- Lower credit costs encourage 1) debt accumulation, 2) asset price increases, 3) overinvestment;
- Debt buildups feedback on the economy and potentially the health of the financial system (if financial “buffers” not big enough);
- This raises (perhaps sharply) the price of risk, and everything goes into reverse with implications for the real economy; growth, jobs, inflation/deflation.

Given developments over the last few years, and even the last few months (as spreads have declined sharply, for sovereigns in particular but also high-yield and syndicated loans), attempts to either support or dismiss such stories take on special and very practical significance for central bankers in particular. This is all the more the case since empirical evidence indicates that joint credit/asset price ‘booms’ do have predictive power for ‘busts’ over horizons of 1-4 years, and we suspect implications for defaults and default correlations as well.”⁸

So, not only was risk not being reduced, it was being increased dramatically. Borrowing standards were being lowered across the board, and this erosion in diligence was most notable in housing. By 2006, 40 percent of all new mortgages in the U.S. were either subprime or Alt-A. Subprime lending is to borrowers who have already proved themselves to be unreliable. Alt-A loans are products with at least one exotic feature, most commonly a no documentation or low documentation loan. Loans were given to these borrowers because default rates were dropping rapidly, and because Wall Street was demanding new mortgages. But default rates were only dropping because home prices were rising rapidly. Who would default when they could sell their home for more than they paid? The lax lending wasn’t confined to housing. Covenant-light loans were becoming industry standard for large swathes of the credit industry.

⁸ “The Pricing of Credit Risk,” Keynote presentation by William R White, Economic Adviser, Bank for International Settlements, at the Workshop on Pricing of Credit Risk, Basel 9-10 September 2004.

As a result, leverage in the entire economy increased. At the end of 2007, credit market liabilities in the U.S. were \$50 trillion, 3.5 times GDP (see chart on p. 5). This was well in excess of the 2.5 ratio that existed in 1997 before the start of the long housing boom and the advent of the global savings glut that allowed America to borrow from abroad. Late 2006 represented the peak for the current account deficit, at about 6 percent of GDP and \$800 billion in annual borrowing from abroad. But by early 2007, the air was starting to come out of the housing bubble, and once prices started to fall, they can plummet. The best measure of home prices, the Case Shiller National Home Price index, was down 23 percent from June of 2006 to September of 2008. With housing inventories still high, especially of vacant homes, prices are still falling. They will continue to fall until the inventories start to clear at a decent rate.

The broader consumer spending and debt bubble is also unwinding now, albeit with a lag. From 1981 to 2007, consumer spending as a share of GDP rose from 62 percent to 71 percent as consumers borrowed more for everything. By 2007, the bottom half of the country had virtually no liquid savings. The median amount of liquid assets – checking, savings, and money market accounts – was only about two weeks of income. The average car was purchased with only 5 percent down. And it was not uncommon for middle income Americans to be carrying five or more credit cards in their wallet. The result of this credit unwind is a U.S. economy that has fallen into a steep recession as the savings rate finally started to rise. With stronger financial linkages than ever, the rest of world entered a steep downturn as well, with the severest outcomes most likely in the other borrowing countries like the United Kingdom, Spain, and Australia. But exporters like Germany, Japan, and China were living off the consumer bubbles in other nations and were not immune from the fall.

The Fundamental Mistake of Housing Policy

Central banks were not the only part of government that was complicit in the housing and credit bubble. Government housing policy was directly subsidizing leverage. The biggest housing policy the U.S. has is the tax deduction on mortgage interest payments, which lowers borrowing costs. For instance, assume you and your spouse are going to purchase a \$300,000 house and earn a combined \$100,000 a year. If you put half down, your interest payments in your first year will approximate \$9,750 with a 6 ½ percent mortgage. This would generate a tax savings of almost \$2,500 through the home mortgage deduction. But if instead you decide to put zero down, your first year mortgage interest payments come to about \$19,500, generating an annual tax deduction of almost \$5,000. This is why realtors commonly refer to your interest payments as your “tax deduction.” They are right in one respect, the higher your down payment, the lower your tax benefit, exactly the opposite of what government should encourage.

The government also subsidized leverage through the government sponsored housing entities, Fannie Mae and Freddie Mac. One of the direct goals of the GSEs was to insure mortgages from default, lowering mortgage rates and again borrowing costs. They were able to operate with scale primarily because of their association with the federal government. As we now know, their ability to privatize profits and socialize losses encouraged them lever up on an enormous scale. At the time of their failure, the two GSEs had balance sheet assets of \$1½ trillion and off-balance sheet guarantee exposure of \$4 trillion. Their true capital was close to zero. Before their takeover by the government, they had become aggressive players in both the Alt-A and subprime mortgage space. Peter Wallison and Charles Calomiris calculate that Fannie Mae and Freddie Mac had \$1 trillion of subprime and Alt-A investments at their time of takeover, almost all of which were added to their single family book of business between 2005 and 2007.⁹ By encouraging loans to people who could not afford them, the GSEs were helping to destabilize the housing market, in direct contrast with their mission.

But housing credit standards had been eroding for at least a decade. One important turning point was the year 1995. The Clinton Administration embarked on a major policy, the National Homeownership Strategy (which led to the creation of the National Partners in Homeownership), designed to increase homeownership rates by encouraging broader financing among other things. At the same time, the Federal Reserve issued new regulations under the Community Reinvestment Act that, in the words of the Federal Reserve Governor who wrote the regulations, set up soft quotas on lending in underserved areas. Another quasi-government agency, the public-private Neighborhood Reinvestment Corporation, also helped set the stage for higher leverage in the housing industry. In 1995, it adopted a model down payment program with a 5 percent standard at a time. The Chairman of the Neighborhood Reinvestment Corporation is by tradition a Federal Reserve Governor, which effectively puts the government stamp of approval on any program. These relaxed standards, combined with a growing economy, allowed the underpinnings of the housing market to begin to erode. Housing analyst Josh Rosner document the broad decline in his 2001 market report:¹⁰

“Traditionally, homebuyers were required to put a significant amount of money ‘down’ as payment for a home. Traditionally this amount was usually 20% of the home’s ‘value’. Down payments assured lenders that buyers had enough of a personal investment in the property to repay the debt. Homeownership in the United States had always been something for which people saved...

The requirement that homebuyers make significant down payments was eliminated in the 1990’s. The National Partners in Homeownership (NPH) urged

⁹ Wallison, Peter J. and Calomiris, Charles W., “The Last Trillion-Dollar Commitment: The Destruction of Fannie Mae and Freddie Mac,” September 2008.

¹⁰ Rosner, Josh, “Housing in the New Millennium: A Home Without Equity is Just a Rental With Debt,” GrahamFisher, June 29, 2001.

and approved increasingly larger reductions in requirements. ‘The partnership should support continued federal and state funding of targeted homeownership subsidies for households that would not otherwise be able to purchase homes. Notwithstanding the growing number of high loan-to-value mortgage products available today, many households, particularly low- and moderate- income families, will need subsidies to supplement down payment and closing funds or to reduce the monthly obligation on a home purchase mortgage’. ‘In 1989 only 7 percent of home mortgages were made with less than 10 percent down payment. By August 1994, low down payment mortgage loans had increased to 29 percent’. This trend continued unabated throughout the 1990’s so by 1999, over 50% of mortgages had down payments of less than 10%. In 1976 the average down payment by first time homebuyers was 18%, by 1999 that down payment had fallen to 12.6%. In 1999, more than 5% of all residential mortgages had no equity or had negative home-equity. Eliminating down payment barriers has created a homeownership option for Americans who previously were forced to rent, due to savings or credit issues.

Over the past decade Fannie Mae and Freddie Mac have reduced required down payments on loans that they purchase in the secondary market. Those requirements have declined from 10% to 5% to 3% and in the past few months Fannie Mae announced that it would follow Freddie Mac’s recent move into the 0% down payment mortgage market. Although they are buying low down payment loans, those loans must be insured with ‘private mortgage insurance’ (PMI). On homes with PMI, even the closing costs can now be borrowed through unsecured loans, gifts or subsidies. This means that not only can the buyer put zero dollars down to purchase a new house but also that the mortgage can finance the closing costs.”

The Bush Administration continued the push to expand home ownership, and in 2002 President Bush adopted a specific goal of increasing the number of minority homeowners by 5.5 million by the end of the decade. The Federal Housing Agency had also lowered their standards and required only a 3 percent down payment to receive a government-backed FHA loan, and even this could be paid by a third party. As the housing sector started to pick up strength on the back of low interest rates and the 2003 turn in the macroeconomy, the government pushed for even easier standards. On January 19, 2004, President Bush proposed eliminating the FHA’s paltry 3 percent down payment with his “Zero-Downpayment Initiative,” which would have allowed 150,000 people in the program’s first year to take an FHA loan with no money down.¹¹ While this proposal was not enacted, the private sector had long been following the government’s lead and, in this bull market, was determined to outdo it. Rapidly rising home prices would make zero down loans available on a massive scale. By 2005, a remarkable 43 percent of all first time homeowners put zero down or took out a mortgage in excess of the value

¹¹ “Bush Administration Announces New HUD Zero Down Payment Mortgage,” HUD press release January 19, 2004.

of the home. If home prices were rising 10 percent a year, a zero down loan would gain a 10 percent equity stake in just 12 months. Or so the logic went.

It's worth emphasizing here that buying a house without a down payment is not home ownership. It is renting with risk. Leverage is an old enemy, and when prices turn down, it can act viciously. If you bought with zero down in 2006, by the end of 2008 you were likely to be underwater by 20 percent. For someone who originally bought a house at four times income, this loss would amount to more than a year of take-home pay, providing a powerful incentive to hand in the keys and walk away. Of course, these people are also to blame. Anyone who forgot all reasonable standards of restraint and rushed to buy is not without fault.

The government also failed in its duty to regulate against egregious actions by the mortgage originators. It wasn't until March of 2007 that the Federal Reserve and other bank regulators issued rules against subprime mortgages that had teaser rates with a large interest rate hike built in. The regulatory action came a full two years after the bad loans were embraced by mortgage originators in volume, and literally simultaneously with the private sector finally reigning itself in.

The Fundamental Mistake of the Private Sector: Trying to Capitalize on Two Government Mistakes

The macroeconomic tilt created by policymakers clearly had a bias toward higher asset prices and more leverage. Rather than pushback, the private sector did its best to reap profits from the system and along the way developed processes with serious incentive problems. Perhaps the biggest sin of the private sector was letting the securitization process distort the traditional creditor/debtor relationship. In the old days, a bank made a loan and kept the loan on its books. This provided a strong incentive to know your borrower and to adequately check his or her ability to repay. The downside to this system was that banks ended up with a regional concentration of mortgages, and were therefore subject to regional housing busts like the ones that occurred in California, Massachusetts, and Texas. Securitization allowed the loans to be immediately sold to a secondary market, in effect nationalizing the housing market, but also providing less incentive for a bank to check the creditworthiness of the borrower. But in the early days of securitization, the packagers were still careful about the mortgages they would allow into the security pools. By the mid 2000s, in the heat of the boom, packagers demanded more and more product, and mortgage securities were being passed around like a game of hot potato. Mortgages were pooled together and then converted to Mortgage Backed Securities. MBSs were converted to Collateralized Debt Obligations. CDOs were converted to CDO squareds. If you only planned to hold a mortgage security for a brief period and then pass it along, like most of the securities' creators, you cared little about the quality.

This process was aided and abetted by the ratings agency. The ratings agency also had a powerful incentive problem: they were compensated based on volume. This encouraged them to rate as many structured products as possible, even when they didn't understand them. Worse, the ratings agency used the same scale for structured products as they did for corporate borrowing. Experts like Professor Joseph Mason of Drexel University have demonstrated that a structured product with a BBB rating was far riskier than a corporate bond with an identical BBB rating.¹² Mason pointed out that the returns themselves were pointing to the mis-ratings, noting in early 2007 that some AAA structured products were returning yields of 200 basis points to their investors while returns on AAA corporate bonds were returning 10 to 20 basis points.

Even worse, the very act of rating a product encouraged the private sector to stop performing due diligence. Professor Mason notes that investors were given "full access to in-house team of quants and market risk specialists, thereby enabling them to out-source the entire CDO risk management process to third party experts." While some investors with fine intentions may have outsourced their risk management in good faith, other investors undoubtedly shopped for yield and a grade while caring little about understanding the enormous complexity behind the products. After all, Warren Buffet himself pointed out that one would have to read 750,000 pages of documents to understand a single CDO.¹³ Most pension funds and insurance companies, by regulation, can only buy investment grade products, and usually high grade ones. This can entice managers to shop for the products with the highest yield for a given grade, rather than to actively question why the product might have a higher yield despite having a similar grade. Based on UBS and Intex data from February 2008, 91 percent of outstanding Alt-A MBS securities were rated triple A and 65 percent of outstanding subprime MBS were rated triple A.¹⁴ And MBS tranches that didn't make the investment grade cut could be converted into investment grade through the CDO machine. The IMF May 2007 Financial Stability Report found, that by using CDOs to rearrange risk within an MBS tranche and adding credit enhancements, 85 percent of a hard to sell triple BBB MBS tranche in a mortgage pool could be converted into triple A securities.¹⁵ Grade inflation was rampant. It is also true that investors, domestic and foreign, were behaving like cattle.

But for banks to be able to load up on structured products, in addition to simply creating and selling them, they needed to expand their balance sheet. From 1975 to 2004, the SEC had a strict net capital rule on broker-dealers that effectively capped their leverage. Under the rule,

¹² "Where Did the Risk Go? How Misapplied Bond Ratings Cause Mortgage Backed Securities and Collateralized Debt Obligation Market Disruptions," Mason, Joseph, and Rosner, Joshua, Hudson Institute, February 3, 2007.

¹³ "What Warren Buffett Thinks," Fortune Magazine, April 14 2008.

¹⁴ Zimmerman, Thomas, Managing Director U.S. Securitized Products Strategy Group, UBS, "Deflating the Mortgage and Housing Bubble, Part IV," October 30, 2008.

¹⁵ "When is a AAA not a AAA?," IMF Financial Stability Report, April 2008.

broker-dealers had to compute net capital daily, valuing all liquid assets at market prices and then applying a fixed haircut by asset type. Under the rule, the broker-dealer was limited in the amount of debt it could incur to about 12 times its net capital.¹⁶ After years of being lobbied, the SEC relaxed this requirement in 2004, allowing banks to instead make their own net capital calculations using mathematical models to price positions and Value-at-Risk models. Strict limits on debt were also dropped. As a result, investment banks like Bear Stearns and Lehman Brothers quickly expanded their leverage, with simple leverage ratios exceeding 30 to 1. The banks argued that much of their book was matched assets and that their VaR based risk systems ensured more-than-adequate capital, assuming that historical correlations held true. But reality is the ultimate proof, and the models failed. Asset correlation and market volatility rose sharply. Leverage is risk.

Guidance for Policymakers

Central bankers around the world must more actively incorporate asset prices into their policy decisions. When asset prices are rising rapidly, policy should be tightened more than otherwise would be the case. There is no rule for how much policy should be tightened, precisely because rule-based monetary policy does not work. Economies are dynamic. Each boom is different. Each recession is new. While no policy or model can guarantee against another boom bust cycle, a keen observer with generations of experience will recognize an asset bubble when he or she sees one. And when one is spotted, the answer is not a shrug of a shoulder. The central bank must engage in a debate with the market, and be willing to back up their opinion with a curtailment of the credit growth that is fueling the bubble. It is better to put the brakes on early on than to let a bubble find its natural peak. History says that this can be quite high indeed.

The Federal Reserve needs to take a more active role in promoting financial stability. While the Fed has from creation adopted the lender of last resort role, providing liquidity during financial crises, it has not always embraced a policy of mitigating boom bust cycles. A full reading of the Monetary Policy Objectives under the Federal Reserve Act reveals that they must do more:

“The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of monetary and credit aggregates commensurate with the economy’s long run potential to increase

¹⁶ Pickard, Lee A., former director of SEC Division of Trading and Markets, “Viewpoint: SEC’s Old Capital Approach Was Tried – and True,” American Banker, August 8, 2008.

production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.”¹⁷

The Federal Reserve likes to describe its mandate as a dual mandate to fight both unemployment and inflation. But a proper reading of its mandate reveals at least five obligations. Most interestingly, the current mandate of the Federal Reserve directs it to control credit aggregates. This means the Federal Reserve has not only the authority to pro-actively prevent an excessive credit expansion; it is obligated to under the law, an obligation it has chosen to ignore for over a decade. This gives the Federal Reserve a responsibility to prevent asset bubbles since they are fueled by excess credit. This objective could be achieved with interest rates, prudent regulation or by using the bully pulpit. Regardless, the Chairmen of the Federal Reserve and other voting members must believe that bubble prevention is a proper role for the central bank. If they want to react to asset markets on their way down, they need to react on the way up as well.

Policymakers must also rethink housing policy to reduce leverage. The first policy should be raising the down payment standard of all government housing assistance programs. The FHA loan policy should be phased up to 10 percent from the current 3½ percent. Refinancings of old loans can be exempted to prevent struggling homeowners from getting out of punitive loans made in the past. Note that even a 10 percent down payment would be twice as lenient as the reasonable standard two decades ago of 20 percent down.

The mortgage interest deduction should also be phased out over time, or reduced as much as is politically feasible. (An immediate repeal would put more downward pressure on home prices and place an added burden on homeowners during already tough economic times.) The mortgage interest deduction costs the federal government \$95 billion a year, providing substantial resources for better designed programs.

One way to proceed would be for the Federal government to provide a down payment match for first time homeowners in lieu of existing subsidies on leverage, an idea that has been advocated by Columbia Professor Charles Calomiris. Any down payment program must be carefully designed to not completely substitute for the homeowner’s ability to save. It would be fairly simple to design a program that lowered down payment costs for first time homeowners substantially, at a fraction of the cost of the home mortgage interest deduction, while creating a substantial equity stake in their home.

The third focus of policymakers should be debt in the financial sector. A large part of the financial system, most notably commercial banks under the regulation of the FDIC, already has an effective limit on their leverage. These banks are subject to a simple leverage ratio that caps

¹⁷ www.federalreserve.gov

their assets relative to their capital. For these banks, if the leverage ratio (here calculated as capital divided by assets) drops below 4 percent, the FDIC must start supervisory intervention. And if the leverage ratio drops below 2 percent, the bank is considered critically undercapitalized and is shut down. This system means that any bank that is leveraged more than 25 to 1 will be under intense regulatory scrutiny. Banks hate these simple calculations because they cannot easily be skirted, which is the very point. The leverage ratio should be the base for controlling leverage for the entire U.S. banking sector and for large global banks as well.

Banks are inherently risky entities. John Maynard Keynes once quipped that a prudent bank is one that goes bust at the same time as all other banks. But this inherent riskiness is why banks need more limits than other parts of the economy. Georgetown Law Professor Dan Tarullo points out that a leverage ratio, because of its simplicity, transparency, and bluntness, could provide a useful “common language” for bank regulators around the world.¹⁸ He argues that, because of its bluntness, a leverage ratio should be used more as a safety net, with more sophisticated forms of regulation enhancing bank surveillance. Former FDIC Chairman Don Powell also favors using the simple leverage ratio as a basis for international regulation. This approach is also looked favorably on by Canada and Switzerland.

Once again, much of the policy consensus has been wrong. The past decade has been dedicated to negotiating the Basel II bank regulations. Basel II, however, favors complexity over simplicity. Bank capital is determined by banks own models, precisely what allowed them to adopt so much leverage in the first place. In trader talk, Basel II allowed all sorts of assets to be leveraged to the maximum. Basel II standards should be supplemented wherever they apply with a simple leverage ratio that provides a firm regulatory backup to prevent new regulatory schemes from being gamed. A simple backstop should not take another decade to negotiate.

Of course, a leverage ratio only works if banks are forced to keep assets on balance sheet, not hidden in complicated off balance sheet entities. The implementation of FAS 140 in 2010 should make banks move most of their off-balance sheet activity back on the balance sheet. The IMF estimates that even a milder form of FAS 140 would move \$2 trillion of assets back onto U.S. bank balance sheets during the 2010 to 2012 period.¹⁹

Conclusion

In Washington, the world is often seen through the federal budget, and the definition of prudence is too often defined narrowly by the size of the budget deficit or surplus. But this is far

¹⁸ Tarullo, Dan. “Banking on Basel.” Institute for International Economics, August 2008.

¹⁹ IMF, Financial Stability Report, October 2008.

too narrow of a definition, with federal liabilities accounting for only 10 percent of the domestic credit markets. Policymakers must broaden their focus to addressing debt throughout the economy, and measure this debt relative to things that matter: sometimes narrowly like bank capital or down payments, and sometimes widely like production and income in the economy. In other words, policymakers must keep their eye on leverage everywhere, not just in Washington.

Central bankers have a special role in avoiding the boom bust cycle we have endured over the last ten years by restricting excessive credit creation when necessary. The achievement of price stability, narrowly defined, was once regarded as the ultimate success, while their silence on asset bubbles was seen as an endorsement of higher prices. The results of this “benign neglect” view of asset bubbles have been too devastating as the U.S. economy is likely in the deepest downturn since the Great Depression.

This boom bust cycle was exacerbated by the psychology of a bull market, which adversely affected the judgment of home buyers, market participants, and regulators. Most of these mistakes were not done with bad intentions. But now the whole notion of ownership, responsibility, and prudent risk has been undermined. If anything, blame could be cast much wider than has been described here, touching all aspects of society. But much more important than distributing blame is moving forward with simple, prudent and effective policy solutions.