Bradley, Foster & Sargent, Inc.
Quarterly Market Commentary

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A Backward Glance at the Panic of 2008

> I have been a trustee of broker-dealers, little cases, and the effect of their bankruptcies on the market was significant. Here, you want to take Lehman, one of the largest financial companies, one of the biggest issuers of commercial paper and put it in bankruptcy. What you are going to do now is take liquidity out of the market. The markets are going to collapse. This will be Armageddon!
>
> Harvey Miller, September 14, 2008, *Too Big to Fail*, Andrew Sorkin

> The system is going to collapse in the next few days. I doubt that you're going to be able to open the banks on Monday. People are shorting financial institutions, they're withdrawing money from brokerage firms because they don't want to be the last people in – like Lehman – which is going to lead to the collapse of Goldman and Morgan Stanley…. You have to do something!
>
> Steve Schwarzman, Chairman, Blackstone Group to Henry Paulson, Treasury Secretary
> September 17, 2008, *Too Big to Fail*, Andrew Sorkin

It has been more than eighteen months since the U.S. came to the brink of systemic financial collapse in September, 2008. The economic damage caused by the financial Panic of 2008 appears to have moderated, and there are encouraging signs that indicate that the U.S. and global economy are expanding again. Before the Panic becomes a distant memory, it is useful to look back at such a cataclysmic event, which has affected every one of us, and attempt to ascertain the actual course of events. We need to discard the myths and popular delusions that often accompany an economic earthquake and uncover the facts. What really did happen? How, in fact, did we inflict upon our nation what former U.S. Treasury Secretary, Hank Paulson, called "the economic equivalent of 9/11"? Can we prevent it from happening again?

This is a story with many subplots, and there is neither time nor space to narrate the story in detail. Investors, who are interested in a closer look at some of the subplots, are encouraged to read one or more of the recently published books on this topic. Henry Paulson has written an excellent book, *On the Brink,* which gives an account of the events from the government's perspective. Andrew Sorkin's *Too Big to Fail* covers the same period but focuses primarily on the key players in the banks and on Wall Street. Michael Lewis, author of *Liar's Poker*, the gem about Wall Street in the late 1980s, has written another fascinating book, *The Big Short*, which chronicles how certain speculators and hedge funds made a killing by shorting the subprime mortgage market, using instruments known as credit default swaps (CDS).

One thing is clear from these books: Without massive fiscal and monetary intervention, there would have been a systemic fiscal collapse in the United States and throughout most of the developed countries. The word "bailout" is now a pejorative term, as populists of both U.S. political parties use it to curry favor with Main Street and excoriate Wall Street. It is hard to dispute, however, that without the many steps taken by the Federal Reserve, the U.S. Treasury, Congress and the President, the Panic of 2008 would have caused the failure of banks large and small, the freezing of money market funds, the collapse of the commercial paper market, long-term gridlock in the credit markets and a path of economic destruction that would have touched every industry in America. Even with decisive intervention, GDP contracted almost 4% – the worst decline since World War II – and unemployment reached double digits.

Run-Up to the Crisis

There was no single, dramatic event that caused the Panic. The seeds of the crisis were planted years, even decades, before. It did not begin as a story of American greed in the banking and mortgage industries, but its origins were rather in the well-intentioned actions of politicians and bureaucrats. All agree that the bursting of the housing bubble was the beginning of financial collapse, but many ignore the seminal role that the U.S. government played in causing the housing bubble. It was, in fact, the government's push for "affordable housing" – the extension of home ownership to lower-income households – that set things in motion. The 1992 Federal Housing Enterprises Financial Safety and Soundness Act (also called the GSE Act) – passed in the midst of the S&L crisis – led Fannie Mae and Freddie Mac to commence their purchase of subprime loans and gradually over the years to accelerate greatly their ownership of these mortgages. These Government Sponsored Entities (GSEs) loosened their lending standards, purchasing mortgages with lower and lower down payments and even no documentation (Alt-A) loans. The existence of GSEs ready to buy ever larger amounts of subprime mortgage paper helped to create an entire industry of mortgage originators and banks seeking to underwrite this paper. The cast of characters in the first part of this Greek tragedy were the following:

Congress:

- Passed Community Reinvestment Act in 1977, later used by regulators to force banks to lend to lower-income borrowers
- Passed GSE Act in 1992 causing Fannie Mae and Freddie Mac to increase purchases of "affordable housing" loans and loosen lending standards

HUD:

- Set annual targets for Fannie Mae and Freddie Mac in their purchase of mortgages from borrowers whose income was below the median income in their area; by 1996, HUD set the goal for GSEs that 42% of all mortgages purchased must be from households whose income was below the median in the area

Fannie Mae/ Freddie Mac:

- Made large contributions to political campaigns of U.S. Senators and Representatives, thereby discouraging strong oversight of these GSEs
- Used phony accounting to overstate profits, allowing their senior executives to cash in on stock options
- Did not stress test "affordable housing" mortgages in their portfolios with models which projected housing prices dropping rather than rising
- Bought more than $1 trillion of subprime mortgages

Federal Reserve:

- Kept interest rates low for a long period following 2000-2001 recession, contributing to housing bubble

Banks and Mortgage Originators:

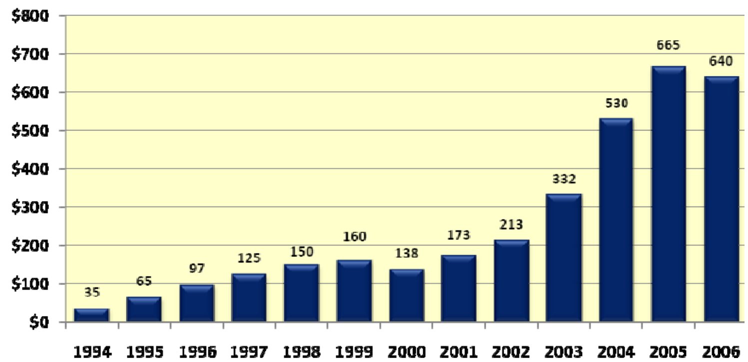
- Originated many poorly underwritten mortgages, selling most loans to Fannie Mae or Freddie Mac or investment banks to be bundled into marketable securities; often encouraged borrowers to take down mortgages which they were unlikely to be able to repay

Borrowers:

- Frequently borrowed amounts that were imprudent – utilizing available mortgage products which included no money down, no documentation required (Alt-A loans), or "teaser" ARMs with very low interest rates for the first two years of the mortgage

The subprime mortgage freight train accelerated down the track starting in 2004. Between 2005 and 2007, Fannie Mae and Freddie Mac acquired an estimated $1 trillion of subprime loans, Alt-A loans (no documentation) and other nontraditional mortgages. This represented approximately 40% of the value of all mortgages purchased from banks and other lenders during that period. In *Too Big to Fail*, Sorkin cites Ben Bernanke, who indicated that outstanding subprime mortgages in 2008 were $2 trillion out of the total $14 trillion U.S. residential mortgage market. The chart below tells the story of the huge growth, beginning in 2004:

Subprime Mortgage Originations 1994-2006



Source: Credit Suisse, Hammond Associates Institutional Fund Consultants

Distribution of Subprime Mortgages to Investors Worldwide

By themselves, subprime mortgages were a disaster waiting to happen, but coupled with leverage and the complexity of mortgage derivative products, the scope of the problem was greatly magnified.

Investment and Money Center Banks: Collateralized Debt Obligations (CDOs) were created by banks bundling dozens or even hundreds of mortgage bonds according to their geography, FICO scores, quality of loans, documentation and yields into one security. Often subprime and Alt-A loans were mixed with better quality loans. CDOs were so complex that few bankers or investors even knew what was in them (see *The Big Short).* Thousands of CDOs were created, and many more were created synthetically through derivatives (as in the case of the SEC's current case against Goldman Sachs). During the financial meltdown, banks were caught warehousing billions of dollars of CDOs on their balance sheets without buyers, causing huge writedowns.

Rating Agencies: Because of their complexity, institutional investors would generally not purchase CDOs without having one of the rating agencies – Moody's, Standard & Poor's, Fitch – assign a rating. Amazingly, a CDO made up largely of subprime mortgages below investment grade would often be assigned an AAA rating. When one of the short sellers in Lewis's book visited Moody's, one of the analysts told him that their computer models for CDOs had no capacity to stress test the securities in case housing prices dropped. And Moody's was the best of the rating agencies.

Institutional Investors: Investors globally purchased different tranches of CDOs – according to the permutations of credit quality, yield, geography, etc. Because CDOs were so complicated, most institutional investors relied on the rating agencies. This turned out to be a big mistake.

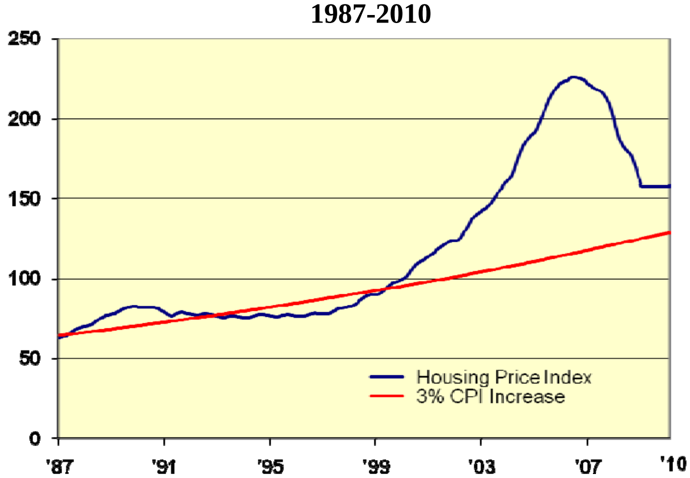
Hedging: Some investors wanted to hedge or insure their CDOs. Using Credit Default Swaps (CDS), AIG's Financial Products unit sold most of the insurance on CDOs until 2005. AIG received a modest annual premium of .5%-2% a year on the CDS sold to a bond investor for guaranteeing the bond against default. Warren Buffett was later to call this "picking up nickels in front of a steamroller." Sorkin reports that AIG's Chairman gave Tim Geithner in 2008 a sheet showing AIG's derivative exposure of $2.7 trillion. $1.2 trillion of it was concentrated with 12 major financial institutions, many of which were European. It was clear that if AIG failed, it would take much of the global financial system with it.

Shorting: Once AIG stopped insuring subprime CDOs in 2005, it became difficult for speculators to short CDOs as no one was writing CDS (insurance) on these bonds. At this point, the investment banks began creating synthetic CDOs which speculators could short by buying CDS on these instruments. This is why the systemic exposure to CDOs was much greater than the notional value of the physical CDO market. The speculator that made the most money was John Paulson's hedge fund whose winnings were approximately $20 billion in 2007-2008 shorting subprime CDOs through credit default swaps and later shorting the stocks of firms that backed the CDOs. The Abacus CDO, which is the cause of the recent SEC lawsuit against Goldman Sachs, was a synthetic CDO shorted by Paulson.

Financial Meltdown

U.S. home prices in most areas peaked in late 2006. Then the housing bubble began to deflate. The chart below tells the story:

S&P/Case-Shiller 10-City Composite Home Price Index
1987-2010



Source: S&P/Case-Shiller Composite

In early 2007, Hong Kong and Shanghai Bank, a very well-managed bank, set aside $10 billion to cover subprime exposure in the U.S. (ultimately the bank would lose $35 billion in its purchase of Household Finance). That summer, two Bear Stearns hedge funds investing in subprime mortgages declared bankruptcy. In hindsight, it was clear the repayment of many subprime loans depended on housing prices continuing to rise. Rising home prices would cause a homeowner's equity to rise, enabling the sale or refinance of the home. Instead housing prices declined, and homeowners with negative equity began to default. As the interest rates on two-year teaser ARMs jumped as much as 10%, mortgage delinquency rates began to increase significantly. Foreclosures ramped up, too. This set the stage for large losses on CDOs and subprime mortgages which money center banks began to suffer in the latter part of 2008. The capital of many money center banks was rapidly depleting, and this, combined with banks' excessive leverage (both on and off balance sheet), caused a race by these institutions to raise capital while their stock prices were still robust and capital from institutional investors available. Once Bear Stearns was purchased by J.P. Morgan in a government assisted transaction in March, 2008, the financial meltdown gained momentum. Hank Paulson, Ben Bernanke, and Tim Geithner worked for most of the summer of 2008 to plan for what turned out to be the economic equivalent of 9/11 in September, 2008. Many investors will long remember September, 2008 when fear and panic (helped by enormous amounts of short selling on bank stocks) caused a run on the financial system – first in the U.S. and then in developed markets around the world. Here is what the military used to call the "butcher's bill" of dead and wounded in the Panic of 2008:

Investment Banks	**Banks**	**GSEs**	**Insurance**	**Money Market**
Bear Stearns	Washington Mutual	Fannie Mae	AIG	Reserve Fund
Lehman Brothers	Wachovia Bank	Freddie Mac		
Merrill Lynch	National City			
	Sovereign			

This list does not tell the full story. At various times between September, 2008 and March, 2009, Goldman Sachs, Morgan Stanley, Bank of America and Citibank were on the ropes and could have failed or been nationalized – without concerted government effort. GE Chairman, Jeffrey Immelt, whose finance subsidiary GE Capital was rated AAA, told Paulson that they were not able to roll over their commercial paper, as the entire commercial paper market was frozen. There were runs on other banks, too, as well as many money market funds. It was Armageddon!

U.S. Government Response to the Panic

Many arms of the U.S. government came together – not always without friction – to avoid another Great Depression. Paulson, Bernanke and Geithner worked tirelessly to avoid a total meltdown. In addition to lowering short-term interest rates effectively to zero, the Federal Reserve expanded its balance sheet to $2.8 trillion, buying commercial paper and mortgages to keep these markets from collapsing. To prevent runs on banks and money market funds, the U.S. Treasury guaranteed money market funds and pressured FDIC Chairwoman Sheila Bair to guarantee bank deposits. To shield the banks from the onslaught on their shares, they pushed Christopher Cox, Chairman of the SEC, to ban shorting the stocks of most U.S. financial institutions for a short period. They were in constant touch with the CEOs of the money center banks, urging them to raise more capital. As the Panic intensified, they shifted from an ad hoc strategy to a systematic approach with the $700 billion TARP, which they finally got passed through the bipartisan efforts of President Bush, Speaker Pelosi, and Majority Leader Reid. They worked pragmatically under enormous pressure to keep the ship from foundering. And, because of these efforts, the capital markets have recovered. It is probable that the U.S. government will recover every penny of the capital injected into the banks, due to the profits from the sale of bank shares, warrants and dividends which will more than offset the losses from small bank failures. It also appears likely that the taxpayer will recoup most, if not all, of the $180 billion injected into AIG. Less certain is how much the taxpayer will lose in the takeover of Fannie Mae and Freddie Mac. Current losses run roughly $200 billion, but total losses are now estimated to grow to nearly $400 billion. The effective nationalization of General Motors (and GMAC) and Chrysler (and Chrysler Financial) may also cost the U.S. taxpayer dearly.

Lessons Learned

It is clear from the above saga that there is plenty of blame which can be assigned to a multitude of players, not the least of which are the executive and congressional branches of the U.S. government, Wall Street and money center banks, the rating agencies and the borrowers themselves. What steps should be taken to avoid a future U.S. systemic financial meltdown? What should be included in the Financial Regulation Bill currently before Congress?

- There should be the explicit acknowledgement that forcing banks into unsafe lending practices to achieve the political goal of greater homeownership has disastrous consequences.
- There should be a new policy that GSEs (using taxpayer money) shall only purchase mortgages where homeowners have made a down payment of 20% or more. Canada (which has the same 65% percentage of home ownership level as U.S.) has this requirement, and experienced no mortgage disaster.
- Banks in which deposits are FDIC guaranteed should have less leverage and be restricted to basic banking, wealth and trust management, and trading activities (Volcker Rule).
- Bankers' compensation should be subject to longer vesting periods for stock-based bonuses, and there should be draconian clawback provisions from the compensation and net worth of Directors and CEOs whose banks fail or need taxpayer assistance.
- Credit Default Swaps should be regulated and only those who own the actual bonds upon which the CDS are written should be able to purchase them.
- Banks should have to allocate more capital for their derivative exposure, and there should be a clearinghouse for CDS with transparency for all parties.
- The uptick rule for short selling should be reinstated. It worked well for more than 70 years and will work well again.
- Fannie Mae and Freddie Mac should be downsized, and there should be more private sector secondary mortgage players in the industry.

For investors, the ultimate lesson is that market bubbles in various asset classes will inevitably occur. Greed and fear are part of the human condition. Stopping market bubbles is like commanding the tides to cease. The trick is to spot them as they occur and withdraw as much capital from them as possible, before they burst. This is why we, at Bradley, Foster & Sargent, Inc., focus much of our attention on trying to recognize asset bubbles and to protect capital by seeking to exit overheated markets in good time. With the U.S. financial system having come to the edge of the abyss, it is not too much to hope that Congress will pass a bill with bipartisan support which will encompass much of the above and strengthen the checks and balances so that we never come so close to financial Armageddon again.