

# RESEARCH BUZZ



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## The Continuing Foreclosure Crisis: New Institutions and Risks

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The Federal Reserve (Fed) and the U.S. Treasury have taken unprecedented steps to stem the financial crisis that began in August 2007 as part of the extended foreclosure crisis. In the most recent episode, several financial institutions either failed or were merged with stronger firms, sparking public concerns for their assets and for their own financial institutions.

**Table 1:**  
**Troubled U.S. Financial Institution Failures or Acquisition by Merger**

<i>Name</i>	<i>Date</i>	<i>Resolution</i>
Countrywide (Bank)	January 11, 2008	Acquired by Bank of America
Bear Stearns	March 14, 2008	Acquired by J.P. Morgan Chase
Indy Mac (Bank)	July 11, 2008	Held by FDIC for resolution
Fannie Mae	September 7, 2008	Taken over by U.S. Treasury
Freddie Mac	September 7, 2008	Taken over by U.S. Treasury
Merrill Lynch	September 14, 2008	Acquired by Bank of America
Lehman Brothers	September 14, 2008	Closed/largely acquired by Barclays and Nomura
AIG	September 14, 2008	Loan bailout for 80 % ownership by Fed
Washington Mutual (Bank)	September 25, 2008	Acquired by JP Morgan Chase
Wachovia (Bank)	September 29, 2008	Acquired by Citigroup

This has led to several new institutional arrangements of questionable value, foremost among them, the Bush Administration's \$700 billion bailout fund for illiquid mortgage-related assets on the books of financial institutions.

Table 1 shows a list of major U.S. financial institutions that have failed or been merged as part of an impending failure in 2008. In addition, a number of major European financial institutions have failed or were taken over by banking authorities, including German banks Sachsen Bank and IKB a year ago, Dusseldorfer Hypo-bank in April, 2008 and Northern Rock in England. Lloyds TSB agreed to take over HBOS, the largest mortgage company in England, on September 19, 2008, and, over the same weekend as Washington Mutual and Wachovia were acquired, Bradford and Bingley was taken over by the British government. Fortis, the owner of ABN Amro's Dutch retail bank operations and its former asset management and private banking companies, was 49 percent taken over and bailed out by a consortium of governments (Belgium, Luxembourg and the Netherlands). Bingley and Bradford's deposits and branch network were immediately sold to Spanish bank Santander at a loss to the British government of £14 billion. Dexia, the French bank, was bailed out by a government consortium (Belgium, Luxembourg and France) on September 30 2008.

The most noticeable feature of these events is the rapidity of successive adverse developments in September 2008, which has spread fear among market participants. But nothing about these developments is a surprise, as all of these institutions have been looking for investment partners to restore their capital for some months, and in some cases, for more than a year. Moreover these institutions had been well known for being excessively exposed to subprime and other risky mortgage loans or to mortgage backed securities. The surprise was the bunching of these failures over such a short interval.

The other noteworthy feature of these developments is the speed and completeness with which the private sector moved in to acquire the assets and operations of these companies with little or no regulatory or taxpayer cost. There are exceptions, but even in those cases, the costs were minimized and the firms involved hardly missed a beat, except for their new owners.

Some observers argue that it was the Lehman failure that led to the cascade of subsequent failures and mergers (see Carrick Mollenkamp, Jon Hilsenrath and Ianthe Jeanne Dugan, "Lehman's Demise Triggered ash Crunch Around Globe," *Wall Street Journal*, September 29, 2008). However, the Lehman failure was part of the September 2008 sequence and seems to have been precipitated by a September 4, 2008 announcement by the European Central Bank (ECB) that the hundreds of billions of dollars of mortgage backed bonds that the ECB was taking as collateral for borrowing would be discounted very heavily in future. (See Letter from the City, "ECB Balances Stance on Banks," *Wall Street Journal*, September 8, 2008 or European Central Bank Press release, "Biennial review of the risk control measures in Eurosystem credit operations," September 4, 2008). The ECB also planned to stop lending against bonds whose underlying loans were not denominated in euros, which would exclude most U.S. mortgage backed securities. Lehman was cited for having large amounts of bonds backed by buyout loans. (See Paul Davies, Ralph Atkins, and Anousha Sakoul, "ECB moves to cut lending risk," *Financial Times*, September 5, 2008). While not effective until February 1, 2009, this action threatened the most important global source for warehousing bad paper against cash advances and reshuffled how financial institutions could finance their holdings of bad paper without sales and consequent markdowns in capital. In particular, Lehman began to move their paper back to the U.S. from their European offices and to aggressively seek new funding sources, to no avail.

The Lehman failure was no surprise. Lehman had been widely reported to have funding and capital prob-

lems for months. The ECB just forced them over the edge by announcing new rules to begin in three months. From another perspective, however, they should have failed much earlier and only the use of abusive borrowing from the ECB and an absence of pressure to mark to market allowed the fiction that they were solvent and liquid.

One popular press story about investment banking failures is that they represent the demise of investment banking because all five independent investment banks have either disappeared (Bear Stearns, Merrill Lynch, Lehman Brothers) or were converted to bank holding company status on September 21, 2008 (Morgan Stanley and Goldman Sachs). But there are other smaller investment banks (Raymond James, for example). More importantly, there are some very large ones that were already part of banking firms, such as Citigroup, J.P. Morgan Chase, Bank of America, Wachovia and UBS, to name a few. Investment banking is hardly dead.

A more important related story is that the cause of the financial crisis is related to deregulation of the financial sector. The takeover of the three failed investment banks by commercial banks could only happen because of Gramm-Leach-Bliley, a 1999 act that broke down barriers between banking, insurance and securities businesses. This was perhaps the biggest deregulation of banking in the century, as has been pointed out by economist Alan Reynolds. An older style of regulation existed for AIG, which had to be bailed out by an \$85 billion loan that will convert to convertible preferred stock that can be converted to ownership of 80 percent of the company. AIG is regulated by over 50 state insurance regulators and the Office of Thrift Supervision, which supervises its holding company. Nonetheless, no regulator was on top of the impending doom of AIG, in particular its capital deterioration. Banking regulators claim that the insurance subsidiaries were solvent, but that is akin to a child welfare agency arguing that children are fine despite their parents losing jobs, home and assets and becoming noticeably disposed to abusive behavior. Apparently there is no mandatory or voluntary coordination of insurance regulators such as that which exists for banks and their holding companies. The problem apparently is, as noted by the Treasury's *Blueprint for a Modernized Financial Regulatory Structure*, the nation has ample but ineffective regulation because we have the wrong structure of regulation for the industry as it exists today. (See U.S. Treasury, March 31, 2008).

It is also important to bear in mind that most of the institutions in Table 1 are not banks. In fact only two of the banks in Table 1, Indy Mac and Washington Mutual, actually reached failure and had to be resolved by the

Federal Deposit Insurance Corporation (FDIC). They were among the 13 banks that have actually failed in 2008. Non-bank failures cannot give rise to the types of runs on financial institutions that provide systemic risk, though this has been the subject of considerable confusion. In a traditional bank run that, because of liquidity shortages can cause the collapse of otherwise sound banks, depositors run and hold cash. If depositors simply move their deposits around, it can be very disruptive to the banks involved, but it does not reduce overall market liquidity, deposits or credit. So far, there is little evidence of runs in the banking system, in the U.S. or abroad, except for Northern Rock. An estimated 98 percent of U.S. banks are “well capitalized” and not at risk of failure. At the end of the second quarter of 2008, only 117 banks were on the FDIC’s “problem bank list” and only a fraction of the number on this list would be expected to fail, based on the most extreme past experience.

Fannie Mae and Freddie Mac, two government-sponsored enterprises (GSEs) that are now under the conservatorship of the U.S. Treasury, held the largest exposure to mortgage and mortgage-backed securities of any institutions in the nation. Some \$5.3 trillion of mortgage assets were either held by the two GSEs or were in the mortgage backed securities that they had guaranteed. The movement of these two entities into conservatorship resulted in losses primarily to stockholders, since creditors and preferred stockholders were guaranteed by the U.S. Treasury. These failures were also no surprise. The government had made changes in regulatory oversight and guarantees that insured that they would fail. Even before that, the thin capital and heavy exposure of the two entities created widespread expectations of impending failure. Recent calls for guarantees of mortgage backed securities ring somewhat hollow since a large share of mortgage assets are now quite explicitly guaranteed by the federal government.

### **The Money Market Fund Debacle**

One of the biggest genuine September surprises was the closing of the Reserve Primary money market mutual fund (MMMF) on September 16, 2008 as the result of a run on its funds. Ironically, Bruce Bent, who along with Henry B.R. Brown was a founder of the MMMF, was the Chairman and CEO of Reserve. Reserve violated one of the most basic principles established by Bent and Brown by holding higher yielding but riskier commercial paper or other short term funds. MMMFs were originally intended to hold short-term money market securities issued by the government to provide comparable returns to small savers on liquid funds. MMMFs hold high quality commercial paper but only in small and well-diversified amounts to enhance their yield,

despite the risk. The Primary fund had held \$785 million of Lehman commercial paper which was marked to zero after the failure of Lehman Brothers. Holding private assets, especially medium or longterm ones, was viewed as too risky for MMMFs. Even high quality commercial paper subjected funds to excessive risk and occasionally led to historic events called “breaking the buck” when a fund could not guarantee 100 percent of principal invested. Typically in those events, the owner of the fund would provide a bailout to insure that the fund could always pay out 100 percent of principal, because failure to do so would incur huge reputation loss and loss of deposits. Reportedly, the last time a firm broke the buck was in 1994. The run on the Reserve Primary fund reduced assets from \$65 billion at the end of August 2008 to \$23 billion at the end of the day on September 16. Other funds also saw runs and closed. Putnam Investments, for example, liquidated its \$12 billion Prime Money Market Fund, selling the fund to Federated Investor’s Prime Obligation Fund. The run even triggered runs on bank deposits as far away as Hong Kong.

Runs on MMMFs do not create systemic risk to financial institutions or the economy. Instead, depositors who do not want an MMMF liquidate it in return for cash and buy another MMMF or comparable safe securities such as Treasury bills. The fund has to sell the Treasury bills or comparable safe assets. So the securities are available to match demand. Nothing has changed, in particular, interest rates or reserves in the banking system, except that the MMMF firm no longer intermediates the holding of Treasury bills for the former holders of the MMMF; instead, depositors hold the securities directly.

Nevertheless, the policy response to the risk of MMMFs was immediate. The Federal Reserve announced on September 19, 2008 a new credit facility to allow banks to borrow from the Fed to buy asset backed commercial paper (ABCP) held by money market mutual funds. The ABCP serves as collateral against the loans. These loans were non-recourse, which means that the loans did not have to be paid back if the ABCP lost value. Any loss would be taken by the Fed. This new facility runs to January 30, 2009 and can be renewed. The Fed also relaxed liquidity and risk-based capital requirements of bank holding companies and state member banks in order to facilitate their participation in the plan. The U.S. Treasury created a MMMF insurance plan for money market mutual funds in existence on September 19, 2008. The plan will run for one year, but it is subject to review after the first three months, before institutions renew their insurance. Participating MMMFs will pay an insurance fee to participate in the plan but

will insure that funds held on September 19, 2008 are not subject to risk of the fund breaking the buck. Funds that already had done so, on or before September 19, 2008 were ineligible for insurance. This is the most far-reaching action taken so far by Treasury since it involves insurance funds held at unregulated financial institutions.

### The Fed to the Rescue

The Fed has been extremely easy in creating private credit facilities over the past year or so in order to stem what it believed to be a credit crunch. Until the past few weeks, however, the Fed has been very tight overall, increasing its overall credit supply, total assets or monetary base by little or nothing. This continued two earlier years of increasingly tight credit from the Fed. Thus, the Fed has played a central role in the shortage of credit in the financial system and the slowing economy. In the last few weeks, however, the Fed has reversed course and expanded its assets dramatically to expand money and credit in the economy. Table 2 shows selected balance sheet totals based on daily average data immediately before the beginning of the financial prong of the foreclosure crisis (August 1, 2007) and after the first year (August 7, 2008), as well as the latest data for the week ending September 24, 2008. This can be seen in the table by the small increase in Fed assets over the first year, \$27.2 billion or 3.1 percent, but the increase in these assets over the latest seven weeks shown is \$285.7 billion, or 31.7 percent. All of this came in the last two weeks of the period. This is a dramatic rise, larger than in any comparable period in U.S. history. Earlier, despite claims that the Fed was stimulating credit supply in the economy, the Fed increased their exposure to the private sector, but sharply reduced their holdings of government credit in order to finance it. Indeed, the Fed was running out of government securities available to sell or lend, in the event that they wanted to sell securities to fight inflation or to lend. In the transition, government securities held by the Fed and actually available for sale fell from over 90 percent of Fed assets to less than half of assets. In the past seven weeks, security holdings have risen, largely due to a new arrangement with the Treasury under which the Treasury sells special securities to the Fed which the Fed can in turn sell or lend to the private sector for the variety of new lending programs they have.

This new program, the Supplementary Financing Program, began on September 17, 2008, and by September 24, the Treasury had borrowed \$159.8 billion from the Fed, allowing the Fed to increase government security holding for the first time in over a year. The program allows the Fed to acquire government securities

without increasing the monetary base or the amount of bank reserves, so that it can expand its assets without affecting the federal funds rate or its ability to achieve its federal funds rate target. Note that the government securities available for sale or for lending have declined to \$275.3 billion despite this new program. This is a strange concept normally, since the Fed can have all the government securities it wants, up to the total in existence, if it simply chooses to buy them. The drawback is that to do so, it must print new money and that this would be inflationary. It would, as a technical matter, also expand bank reserves and this in turn would reduce the federal funds rate relative to the Fed's target. Over the past year, the Fed has let its efforts to expand credit in the economy be constrained by its efforts to hit a federal funds rate target at the expense of supplying credit liberally to boost lending and spending in the economy. And despite these recent efforts, the Fed has allowed the fed funds rate to drift down below its target and by a relatively large amount to facilitate most of the increase in the Fed's total assets and bank reserves.

There also have been other programs to boost liquidity globally in the past two weeks. On September 29, 2008, the Fed announced that they were increasing the size of the 84-day maturity Term Auction Facility (TAF) to \$75 billion from \$25 billion and created two new forward TAF auctions totaling \$150 billion, to be conducted in November, to provide term funding over the year-end. They have also expanded swap lines with nine foreign central banks by \$330 billion to a total of \$620 billion, up from \$290 billion. Certainly these actions and an increase in Fed credit and total assets of nearly \$300 billion within two weeks show the power of central banks to increase credit, liquidity and money very greatly in a crisis.

The big question now for the Fed is, whether it offsets the large expansion in its total assets and credit of the past few weeks or offsets it by selling some of the new securities, it has to trim back its total assets, credit and bank reserves in order to support its federal funds target. The effective federal funds rate traded well below its target level from September 19, 2008 to at least the end of the month. In light of the financial turmoil in the world economy, it would appear that the Fed will finally sustain its efforts to increase money and credit in the economy in order to stimulate a recovery in credit and spending.

One of the many ironies of the crisis has been the power of central banks to expand credit in the economy when they choose to do so. For most of this crisis, the Fed chose not to do so. In the past two weeks, however, the increase of credit of nearly \$300 billion dwarfs the

speed and effectiveness of the much discussed \$700 billion bailout program debated in the U.S. Congress, because that program would not increase credit at all, simply rearranging it from worthwhile private sector ventures to loans to the government. Secondly, the Fed's credit creation can happen much more rapidly and sizably than the Treasury could use its bailout fund to buy

up illiquid assets. The public is not being directed to the right tools of policy in this or any crisis. The Treasury cannot create credit, it can only redirect what is already in the economy. The Fed can actually increase the overall supply of credit, at least when it chooses to do so. If the government wants to restore confidence, it should point to the Fed, not the Treasury.

**Table 2**  
**The Fed has finally begun to expand its total assets and credit (millions of dollars)**

<b>Selected Assets (average for week ending on date indicated)</b>	<b>August 6, 2008</b>	<b>August 1, 2007</b>	<b>Change</b>	<b>September 24, 2008</b>
Securities held outright	\$479,291	\$790,758	-\$311,467	\$480,272
Repurchase agreements	110,500	25,786	84,714	111,714
Term auction credit facility (TAF)	150,000	NA	150,000	150,000
Primary credit	17,370	2	17,368	39,357
Primary dealer credit facility (PDCF)	0	NA	0	88,147
Asset backed CP MMMF liquidity facility	NA	NA	0	21,760
Other credit extensions	0	NA	0	38,375
Maiden Lane*	29,105	NA	29,105	29,373
Securities lent to dealers -term (TSLF) -overnight facility	124,862	NA	124,862	185,636
	7997	9,917	-1920	19,312
Total private credit* -Incl. security loans	306,975	25,788	281,187	385,264
	439,834	35,705	404,129	590,212
Total assets (end of period)	901,307	874,112	27,195	1,186,957
Available government securities	346,432	780,841	-434,409	275,324

\*Maiden Lane is counted as a credit even though it is an equity position.

Source:  
Board of Governors of the Federal Reserve System

Perhaps as great a problem of the September 2008 episode is that the foreclosure crisis is widely expected to continue for almost another year, regardless of efforts to create credit or to remove illiquid and devalued mortgage related securities from the private sector. Given the difficulties of recent weeks, one wonders if market confidence can withstand the continuing wave of foreclosures and their consequences as they continue to rise to their peak.

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## Bankruptcy Levels Spike

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Indiana’s bankruptcy levels continue their upward trend, according to U.S. Administrative Courts data for the second quarter of 2008. Filings rose by 26.2 percent from about 27,700 for the year ending June 2007, to 35,000 for the year ending June 2008. Indiana ranked fifth in bankruptcies per capita, slightly improving from the fourth position it held over the past year. While there were 4.41 filings per 1000 people in the second quarter of 2007, this number has risen to 5.5 filings in the second quarter of 2008. The Federal Deposit Insurance Corporation (FDIC), in its state profile for Indiana, lists the nonbusiness bankruptcy per capita at 4.87 at the second quarter of 2007 but it is now 6.22 as of the second quarter of 2008. Indiana led the country in Chapter 7 filings (which allows for the sale of a debtor’s nonexempt property in order to pay off creditors) over the past four quarters, but ‘improved’ to second place in the second quarter of 2008, behind Michigan. Chapter 13 filings (which allow one to file a repayment plan) ranked eighth in the first two quarters of 2008, up slightly from seventh in second quarter of 2007.

Indiana’s unemployment rate, a driver of bankruptcies, has seen a steady upward trend since the third quarter of 2007, when it was 4.5 percent. In the second quarter of 2008, it reached 5.3 percent, and more recent unemployment data show that this trend will continue into the coming quarter. However, these unemployment rates are still below national unemployment rates. That the level of unemployment is rising may suggest that bankruptcy filings are not likely to slow down soon.

In comparison to other Midwest states, Indiana performs poorly. It continues to have the highest filings per capita in the region, even worse than Michigan, which continues to experience a much higher unemployment rate. While Indiana’s unemployment rate is currently 5.3 percent, Michigan’s is at 7.9 percent, yet Indiana’s bankruptcies are still higher. This pattern, highest bankruptcy rate/lowest unemployment, holds for comparisons of Indiana to the other four Midwestern states in Table 2.

On a national level, the trend is similar and continues to rise, with per capita bankruptcies currently at 3.15 per thousand, up from 2.48 a year ago. The chart below shows the continued dismal position held by Indiana and other regional states, all showing poorer figures than the national level. Filings spiked 28.9 percent from the twelve month period ending June 2007, to the current 968,000 filings. These appalling figures suggest that the current economic hardships continue to impact households negatively. Similar to Indiana’s unemployment data, the national unemployment rate has been rising, though at a higher rate than Indiana.

The Mortgage Bankers Association recently released its 2008 second quarter National Delinquency Survey results. Sustained foreclosure pressure is still evident, especially for those who took out subprime loans. Although subprime inventory is still high, the second quarter saw a slight decline, down to 12 percent from 12.4

TABLE 1: NUMBER OF BANKRUPTCY FILINGS

Bankruptcy Filings per Thousand Population					
	2007Q2	2007Q3	2007Q4	2008Q1	2008Q2
<b>U.S. Total</b>	2.48	2.62	2.78	2.94	3.15
<b>Indiana</b>	4.41	4.67	4.90	5.16	5.50
<b>Ohio</b>	3.97	4.23	4.42	4.57	4.72
<b>Michigan</b>	4.07	4.34	4.59	4.82	5.10
<b>Kentucky</b>	3.69	3.83	4.05	4.25	4.51
<b>Illinois</b>	2.87	3.04	3.23	3.43	3.76
<b>Wisconsin</b>	2.51	2.68	2.83	3.01	3.35

Source: Administrative Office of the U.S. Courts.

percent the previous quarter. As the interest rates of these subprime loans continue to reset to higher rates, higher bankruptcies may be indicative of many households filing Chapter 13 to avoid losing their homes.

**TABLE 2: STATE RANKING FOR FILINGS PER CAPITA**

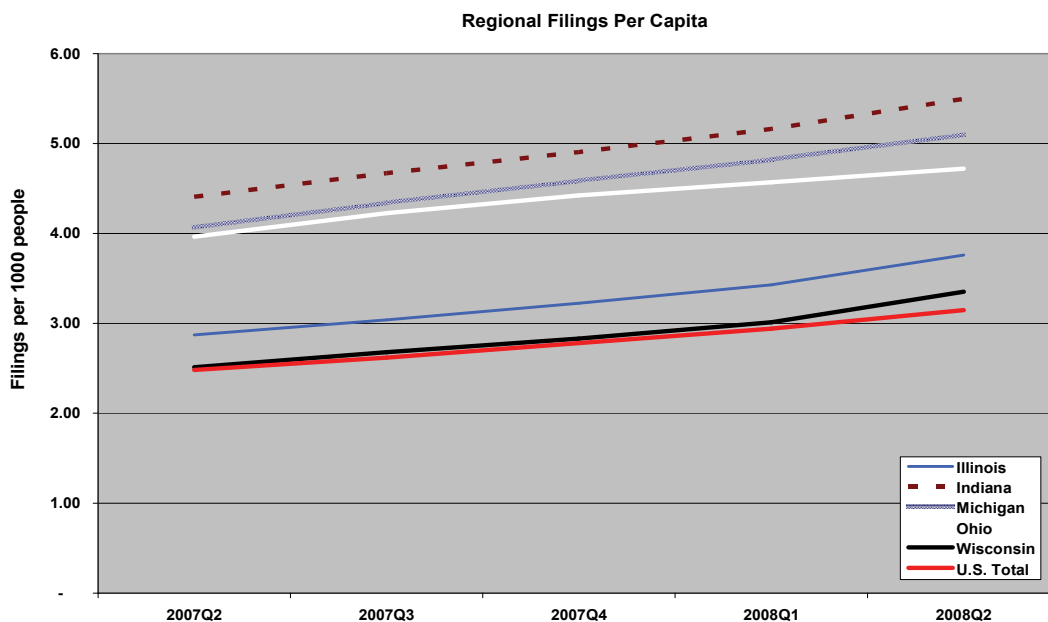
Ranking Per Capita					
	2007 Q2	2007 Q3	2007 Q4	2008 Q1	2008 Q2
Indiana	4	4	4	4	5
Ohio	7	6	6	7	7
Michigan	5	5	5	5	6
Kentucky	8	8	9	9	8
Illinois	13	13	13	13	12
Wisconsin	17	17	17	16	16

Source: Administrative Office of the U.S. Courts.

Recent evidence suggests that nearly all debtors who file for Chapter 13 are homeowners wishing to save their homes (White and Zhu, 2008). While the foreclosure and bankruptcy figures generally seem to move in tandem, this relationship (or lack thereof) will only become evident once the housing crisis winds down.

It is worth noting that, while the above statistics primarily comprise of Chapter 7 and Chapter 13 bankruptcies, Chapter 11 bankruptcies, which allow for businesses to reorganize and provide a plan to stay alive and also pay creditors over time, grew by about 31 percent from a year earlier to 7,293. With companies still reeling from the effects of the U.S. foreclosure crisis and the economy continuing to slow down, the number of Chapter 11 filings is bound to increase. The first quarter of 2007 saw over 70 mortgage companies go into bankruptcy or out of business (see Tatom 2008). Many firms have exited the subprime business. Others like Lehman Brothers have gone further to declare bankruptcy. Merrill Lynch was able to reassess its position and was acquired by Bank of America. With so many peripheral businesses affected by the current turmoil, more job cuts may be expected – and the potential further down the line for more individuals to file for bankruptcy. And the vicious cycle continues. In the meantime, upon recommendations by Treasury Secretary Henry Paulson and Federal Reserve Chairman Ben Bernanke, Congress will try to come up with a bailout package that allows the Treasury to rescue troubled financial institutions. Among some of the sticky provisions being pushed for inclusion in this package is one that would alter current bankruptcy law, allowing judges to alter mortgage terms and thereby make it easier for homeowners to keep their homes.

**Chart 1: Regional Bankruptcy Filings (per thousand)**



Source: Mortgage Bankers Association

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