

RESEARCH BUZZ



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The Foreclosure Crisis: A Two-Pronged Assault On The U.S. Economy

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The U.S. mortgage loan foreclosure crisis has become the biggest risk facing the U.S. economy. In August 2007, the National Association of Business Economists named the combined effects of subprime debt defaults and excessive personal and corporate debt as the greatest short-term threat to the U.S. economy. There are two distinct channels of influence of the subprime problem that raise concern. The first is the rise in default and foreclosure that affects homeowners, lenders, neighborhoods and the real estate industry most directly. This was the focus of the recent Networks Financial Institute Financial Forum, *The Foreclosure Crisis: Its Causes, Consequences and Remedies*, held August 28, 2007 in Indianapolis. The second channel is financial, flowing from the effects on lenders' financial viability and on financial markets. The second channel has

become more visible and dominant in popular discussions of the issues since mid-August 2007.

The timing of developments in these two channels will determine how fast consumers and business work through these problems and restore stability and growth to the nation's housing and financial markets. The bottom line is that the problem is rooted in housing markets and these markets are likely to be very slow to adjust and to eliminate difficulties. It takes time for good mortgages to go bad and for bad mortgages to move from delinquency in payments to the initiation of the foreclosure process. It also takes time from initiation of the process until the process ends with the sale of a property to a new owner and the distribution of the losses to affected parties. Thus no matter how quickly financial markets adjust, the effects of the foreclosure problem, even those working through financial markets, will continue to play out for a at least another year.

While financial markets work much more quickly, they will be held hostage to the unfolding effects of the foreclosures in the housing markets and among lenders. Asset pricing is forward looking, which means that buyers and sellers of financial instruments base the value of assets on the future cash flows expected from assets and today's estimates of the risks associated with realizing those expected cash flows. Thus, for example, financial markets process a spike in the default rate on home mortgages into the value of mortgages and related assets very quickly. Firms are failing because of the

Table 1
Indiana and U.S. foreclosures in the first quarter of 2007

	Foreclosure rate	Loans serviced	Loans in Foreclosure	Percent of loans serviced	Percent of foreclosed loans
Indiana					
Prime	1.40%	573,745	8,032	69.5%	32.7%
Subprime	9.57	122,033	11,679	14.8	47.5
FHA	3.95	107,198	4,234	13.0	17.2
All loans	2.98	825,008	24,585	100.0	100.0
United States					
Prime	0.54	33,924,965	183,195	78.6	32.6
Subprime	5.10	5,878,011	299,779	13.4	53.4
FHA	2.19	2,981,809	65,302	6.8	11.6
All loans	1.28	43,895,066	561,857	100.0	100.0

changes in asset prices or because they are unable to meet the financial demands of their creditors. They will continue to do so as realizations of losses and their location in the global marketplace unfold. Unfortunately these losses will arise in the mortgage loan sector as defaults and foreclosure continue to rise over the next year or so, but also the losses will plague firms that hold these loans or related securities as major assets, even if they have taken write-downs on asset values already or in the next few months.

The emerging foreclosure problem

The national foreclosure problem did not become very visible until late 2006. The national foreclosure rate began to rise from about one percent at that time and reached 1.7 percent in the third quarter of 2007. But subprime loans, which are loans to borrowers with relatively low credit scores and records of poor credit performance or little credit experience, had become a large share of all mortgages by then. Other higher risk mortgages include credit extended by the federal Housing Administration (FHA) and so-called "alt-A" loans, which are loans to

borrowers usually with prime credit scores, but who do not provide any documentation ("no-doc") of income or wealth or ability to service pay the loan, or very little documentation ("low-doc"). They have been reported to constitute over 10 percent of all mortgages. When all three categories are added together, nearly 30 percent of loans outstanding are estimated to be in the high-risk category.

Both subprime loans and FHA loans have foreclosure rates that are much higher than that for prime loans. These loans alone, without considering alt-A loans, make up about 65 percent of the loans in foreclosure. The table shows some data from earlier this year that provides some perspective on the beginnings of the problem nationally, and the severity of the problem in Indiana, which has ranked first or second in the nation in foreclosures since 2001. The subprime problem is largely an adjustable rate problem. As shorter-term interest rates, to which adjustable rate loans are typically tied, rose in 2004-2006, prime borrowers and even better-advised FHA borrowers shifted to fixed mortgage rate loans. About 80 percent of prime borrowers and about 90 per-

cent of FHA borrowers have fixed rate loans. In contrast, 58 percent of subprime borrowers have adjustable-rate loans. These loans are the biggest foreclosure risk facing the nation.

It will get worse due to the importance of subprime resets

The origins of the problem date back to 2004-2006 when a large share of new mortgage loans were made to subprime borrowers, borrowers who had relatively low credit scores and could not qualify for conventional mortgage loans at normal market interest rates. Many of these loans began to default much earlier than the normal experience from the past. In fact, some of them went into default without ever making a payment. As the marginal adjustable-rate loans begin to adjust in coming months and for the next year or so, the foreclosure rate is expected to spike further. Many of these loans will have interest rates that adjust up from low "teaser" rates, making their already high subprime rates unaffordable, even if short-term interest rates remain the same or fall.

According to *The Financial Times* (September 26, 2007), the average adjustable rate mortgage was offered at 7 percent in 2005-06. These loans will reset to 9.45 to 10.85 percent in their initial reset, according to Deutsche Bank and Loan Performance. Such an increase would raise principal and interest payments from \$ 665.30 to \$837.21 to \$941.06 for each \$100,000 borrowed, or 25 to 41 percent. These rates are expected to spike in the 12-18 months beginning in November 2007. This also highlights that the time is short for the portion of these borrowers who currently can afford their current mortgage payments, but not the higher ones, and their lenders, to take action to avoid this spike.

The U.S. Treasury has announced plans

for major lenders to voluntarily freeze teaser rates for up to five years to lessen the impact of the crisis. But only lenders who are current on their loan payments and can afford their teaser rates can qualify for help. Congress is also working on legislation that will make it easier for homeowners with subprime loans to refinance with fixed-rate FHA, if they can qualify. This program is expected to benefit about 200,000 to 300,000 borrowers, but the magnitude of the problem will far exceed this. The Federal Reserve has also issued a request for comments on new proposed regulation that would make it difficult for borrowers and lenders to repeat many of their mistakes from the past. As future comments and actions will show, however, these proposals will make it more costly or impossible for low-income first-time buyers to access credit markets to obtain financing, yet it was these opportunities for unconventional finance that led millions of borrowers, who otherwise would not have been able to buy homes, to successfully transition into home ownership. For example, Gerardi, Rosen and Wilen (2007) find that borrowers today are more able to access housing based on their long-term expected income than they have been earlier because of new innovations on credit markets. This possibility could be taken away by new rules proposed by the Fed. Interestingly, they also find that the growth of the government sponsored enterprises Fannie Mae and Freddie Mac have had no effect on such access, despite that being their principle mission.

Most estimates of the impact of foreclosure on the housing market show that it has reduced real GDP growth by about one percentage point since spring 2006; with the continuing drops in housing starts, this effect is expected to be no larger than this through the end of 2008. Housing starts peaked in late 2005 and January 2006, when starts hit 2.3 million per year. Since then, starts have plummeted nearly in half,

to 1.2 million (September-November 2007). While there is some slowing in the pace of decline, there is little evidence that the end of the decline is imminent.

The pace of house price increases also slowed after 2005. During 2005, house prices rose at a peak 9.5 percent rate faster than consumer prices, using the house price index measured by the Office of Federal Housing Enterprise Oversight (OFHEO). Since then, the pace of relative price increase has slowed to -0.3 percent over the year ending in the third quarter of 2007. Further slowing cannot be ruled out; it is possible that the relative price will decline and many analysts have suggested that the actual house price index could fall. The Standard & Poors' Case-Shiller house price index for 20 cities (prone to having the largest cyclical swings in house prices) shows declines at about a five percent annual rate for the past two quarters, but this is not reflected in the broader national measures. Some of these cities actually had price bubbles in the recent years, though this was not the case on a national basis using the OFHEO or other measures. The key conclusion is that there is no recession that can be expected from the housing sector consequences of the foreclosure problem, though some analysts, based on an expected worsening of the problem or the credit market influences of foreclosures, point to substantial risk of recession.

Some analysts focus on the influence of the foreclosure crisis on consumer spending instead of residential construction. The value of residential housing assets in the United States is about 21 trillion (third quarter 2007), about 28 percent of total household assets. Some fear that the foreclosure crisis will lead to a sharp reduction in household wealth and lead consumers to attempt to boost saving and cut spending in order to rebuild wealth. See Mishkin (2007) for example. Others question whether there

is likely to be such a sharp reduction, and should it occur, that it will be sufficiently powerful to affect consumer spending appreciably (see Stafford, for example).

The financial effects of the foreclosure problem

The other prong of the foreclosure problem is financial; every mortgage that is foreclosed results in someone losing their house and having to bear transitional housing costs and the loss of what is for them sometimes a large loss in the equity they had in a house. The greater costs of losing a home through foreclosure are the so-called "psychic costs" in embarrassment, self-confidence and self-esteem for parents and children, as well as the damage of a deflated credit rating on the ability to find work, to secure a new residence, including a rented one, to acquire insurance, to get credit or to secure any good or service that carries future responsibilities for payment. The biggest financial losses, however, usually accrue to the mortgage lenders and those who have financed them.

In early 2007, mortgage lenders, particularly "mono-line" lenders, who only do mortgage lending, began to fail in large numbers, either because they held relatively large asset positions in subprime loans that were moving into delinquency or losing value because of expectations that they would, or because of the decline in the lending business. Over 70 mortgage companies went into bankruptcy or out of business in the first quarter of this year. American Century was the first of the major mono-line mortgage lenders to exit the industry. Other large mortgage lenders that have failed or are in bankruptcy include American Home Mortgage and First American Mortgage. Many large financial providers exited the subprime business, including H&R Block, Nomura Securities, Lehman Brothers and Countrywide Mortgage.

Beginning in the spring and summer of 2007, hedge funds, large and small, went out of business because of losses on collateralized debt packages that they held and that were based on payments on subprime loans. Best known are the near half-billion dollar losses at UBS' hedge fund Dillon Read, due to about \$150 million in direct losses and related liquidation costs, and the \$2 billion in losses at two Bear Stearns funds that threatened the viability of the firm. Sowood Capital lost \$1.5 billion, half its fund, before being sold to Citadel Investment Group. Major investment banks, including Merrill Lynch, Morgan Stanley, Goldman Sachs, Bear Stearns Lehman Bros., Credit Suisse, Deutsche Bank and UBS, lost 15 to 30 percent of their market capitalization in July and August. Dozens of hedge funds have closed in July and August because of large subprime related losses and a lack of liquidity.

The U.S. subprime crisis spread to other countries. U.K.-based Calibur Capital lost 82 percent of its \$900 million hedge fund because of subprime related losses and will be closed. Basis Capital in Australia announced that one of its funds, part of a \$1 billion group, could lose half its value, due to subprime and structured credit tied to subprime loans, while others including Absolute Capital in Australia and BNP Paris announced suspensions of redemptions and withdrawals because of subprime losses.

The worst phase of the process, at least from the perspective of financial market losses, came during the week of August 9, 2007 when two state-owned German banks were bailed out. It was these potential failures that led credit markets to seize up and to the massive intervention, over \$130 billion, by the European Central Bank. The Federal Reserve responded in kind, though not in scale, by injecting funds into the credit market, lowering the discount rate, and forming a consortium of major banks to

borrow at the discount window to show that it is all right to borrow from the Fed to further its attempt to prop up the most hard hit markets for short-term financial and commercial credit. The loan volume in the asset-backed commercial paper market declined about 6 percent or \$90 billion in the week ending August 23 because this paper was partially backed by an unknown but small proportion of subprime mortgages

The asset-backed commercial paper market shrank in August because of the realization that most of the pools of assets that backed this commercial paper contained varying shares of subprime mortgages of varying risk of default and foreclosure. Hedge funds following this model and other firms dependent on the commercial paper market have reduced the supply of these assets by more than the decline in demand, so that interest rates on these instruments actually fell throughout August and September. The shrinkage in the commercial paper market has resulted in other credit products being dumped on markets besides subprime loans. More and more funds are surfacing that have financed long-term and illiquid structured asset holdings with short-term asset backed commercial paper. Many of these firms have prime brokerage arrangements, which provide servicing of financial transactions, and credit, with major investment banks so that the spillover effects fall on major banks, jeopardizing bank capital. Most analysts expected the subprime problem to be contained among specialized mortgage lenders and hedge funds, and, more importantly, for there to be little effect on banks or other systemic effects on the banking system.

The spread of the subprime loan problem to institutions that had heavy exposure to such loans quickly was augmented by institutions that financed themselves issuing asset-backed commercial paper. Even if they remained solvent after their losses on the

subprime related assets, their ability to refinance their short-term debt positions became impossible. The only recourse was to obtain alternative financing or begin to liquidate assets whose value had certainly fallen but was unclear and too risky in a cautious market. Not surprisingly, analysts began to talk about credit markets that were seizing up, or even a credit crunch. These developments mushroomed when it became clear that banks, the one group of institutions that investors thought relatively more immune, began to exhibit similar problems.

In part, the expectation that major financial firms and banks would be insulated from the effects of the foreclosure problem was based on the well-capitalized position of the nation's banks. Cracks in this story widened following bailouts and the failure of Sachsen LB in Germany. The crisis spread to Northern Rock, the fifth largest mortgage lender in the United Kingdom, which suffered the first run on a British bank since the Overend, Gurney and Co. run in 1866. This bank had also come to rely on non-deposit commercial paper financing and when that dried up there was a run on the small amount of deposits it had relative to its assets. The most significant failure in the United States was that of NetBank, a \$2.5 billion internet bank based in Georgia that had taken on a portfolio of subprime mortgages and whose lending activity had resulted in losses of \$200 million in 2006 alone. This was the largest US bank to fail since 1993 and only the second failure of the year.

Countrywide, the largest mortgage firm and mainly a prime mortgage lender, was the first to suggest that subprime problems were migrating to prime loans, especially home equity credit lines, when they announced a sharp reduction in second quarter earnings on July 24, 2007. Subsequently speculation over the trouble at Countrywide

led to large stock price declines and a liquidity problem that forced them to take up all of an \$11 billion credit line and to sell \$2 billion in convertible preferred stock to Bank of America. Countrywide announced the elimination of its Full Spectrum subsidiary, its subprime and alt-A lending arm, and its wholesale division, which arranged loans through brokers, on August 20, 2007. It later announced the layoff of about 20 percent of its 60,000 workers. By late September, along with other indicators of a return to normality, Countrywide announced that its deposits had begun to rise in response to its offer of above-market interest rates.

On the financial market side of the foreclosure crisis, employment has already declined, with 88,000 jobs in the finance sector lost in the first eight months of this year. In just the 10 days from August 13 to August 23, 2007, the *Wall Street Journal* found about 12,000 announced job losses at mortgage companies in the subprime and alt-A loan areas.

By October 2007, many signals suggested that the pressures on global financial markets were easing. Pressures on the Federal Reserve to provide liquidity through its discount window had eased and primary credit through this facility had declined to an average of \$88 million in the week ending September 26 after peaking at \$2.9 billion during the week ending September 12. Before the credit crisis and bank failures in Europe around August 9th, such credit had been nearly zero. Other signs of easing include the fact that prime 30-year fixed rate mortgages have had lower interest rates since August 9 and government securities, especially short-term securities, had lower yields following August 9, than they had at the beginning of the crisis. The flight to quality that lowered the three-month Treasury bill rate from 4.77 percent on average for the week ending August 3 to a low of 3.62 percent two weeks later, rose back to 3.93 the

week before the Fed cut its federal funds rate target by 50 basis points to 4.75 percent. Treasury yields with maturities from 2 - 10 years continued to fall until the Fed action and then began to rise, though they remained well below pre-crisis levels.

It is far too early to know how this crisis will play out. The seizing up of credit markets appears to have come to an end, though the market for subprime mortgages is moribund, as is the market for securitized debt based on asset pools containing them. While asset-backed commercial paper volume outstanding continues to fall and is down from nearly 1.2 trillion in early August 2007 to 0.8 trillion in December, it was replaced, when borrowing firms were credit worthy, by a large increase in the volume of commercial bank and institutional money market lending. To finance these loans, banks have increased issuance of certificates of deposit, and institutional money funds have expanded, as higher rates than earlier attracted the funds that formerly were invested in asset-backed commercial paper. Jumbo mortgages, those for more than \$417,000 that cannot be bought and securitized or held by the government-sponsored credit institutions Fannie Mae or Freddy Mac, have faced a more limited private market and their rates have risen to exceed conforming loan rates by a full percentage point or more, making these loans more expensive for borrowers than they were before August 9th, at least until early October. The spread between conforming and these non-conforming loans spiked to about a full percentage point, more than twice the previous peak level of about 50 basis points seen in previous periods of stressed credit markets.

Major international banks continue to register losses. UBS, for example, warned of third-quarter 2007 losses of about \$2.5 to \$3.4 billion on its fixed income operations, including the effects of subprime mortgage-related assets. Deutsche Bank warned of

losses of \$3 billion for the same reasons and Citigroup warned of losses of nearly \$6 billion, including \$1.3 billion for losses due to subprime loans, but much of the rest due to losses on consumer credit and mark downs of leveraged. Similarly, Morgan Stanley announced third quarter losses of \$940 million on leveraged loans and another \$41 billion for fixed income, mainly mortgages and other trading positions. Lehman Brothers and Bear Stearns each announced \$700 million losses for the third quarter, due to debt write-downs. These are just a few of the major losses reported. The global financial sector has survived the credit crisis that began in Europe on August 9, 2007 quite well. Whether more bouts of failure and selective freeze up in some corner of the credit market will reappear is anyone's guess. But it does appear that the credit markets and banks are much more resilient and stronger than had been believed in mid-August and can adjust quickly and relatively painlessly to a breakdown in confidence or trust in various credit instruments. The CEOs of many large banks have lost their jobs, including those of UBS, Citigroup, Morgan Stanley, and Merrill Lynch, and insolvencies and more job losses are expected to continue for some time.

In December 2007 another round of liquidity problems surfaced as end-of-year liquidity demand of financial institutions led to a spike in borrowings from central banks, and new facilities for longer term borrowing reaching 90 days in the United Kingdom. For example, bank borrowing from the Fed averaged \$3 billion in the week ending December 13, 2007, rivaling the temporary peak in September. One of the ironies of the situation is continued talk of "frozen" or "seized up" market and a credit crisis. Among financial experts, financial market thinking is dominated by concepts of rational agents participating on forward-looking, self-correcting markets. In this case, markets cannot seize up or fail. Prices

adjust rapidly to restore market balance. Yet “Special investment vehicles” or SIVs (shades of Enron), and other issuers of asset backed securities, are said to face frozen markets. Historically, this is a claim made in employment markets and other non-financial markets that refer to situations where market participants refuse to trade at existing prices. Nothing is frozen except their unwillingness to trade and that thaws as soon as it is clear that there are no better opportunities, such as being bailed out or allowed to hold failed assets on your books without taking losses. Early efforts to create a consortium to hold these assets at unchanged or little changed prices have failed, so banks are taking these assets back on their books and financing them internally. Freddie Mac and Fannie Mae, along with banks, have recently launched efforts to avoid taking losses on loan guarantees, the next stage of the crisis, but are not likely to escape realizing losses in any meaningful sense, such as valuation, solvency or failure risk.

What credit crunch?

The notion of a credit crisis is equally problematical. The simplest evidence of a credit crunch is that the scarcity of credit would drive up the price of credit. But with few exceptions, interest rates have fallen since early August 2007; moreover they fell before the Fed began to lower the federal funds rate target and they continued to fall and by more than the Fed cuts at least until recently, when inflation and policy risk scares began to push rates higher, at least temporarily. Most interest rates are far below levels of early August. The key instruments that have exhibited higher levels are jumbo mortgage rates, where there has been some uncertainty about their marketability, and bank CD rates where the switch in funding from SIVs through asset-backed commercial paper has switched to bank financing along with funds from institution

money market funds. Another market where there is upward pressure is the London inter-bank offering rate, a rate for loans between banks in London. Due to the discovery of an absence of an efficient and quick resolution method for bank insolvencies in Britain, loans there have taken on unusual risk. But even dollar-denominated loan rates there are lower than they were in August. Bank lending and money market institutions have expanded much more than the decline in asset-backed commercial paper since early August.

Besides a generally declining cost of credit, it is also the case that bank lending has accelerated since July, at least according to weekly and monthly seasonally adjusted data from the Federal Reserve Bank of St. Louis. From the week ending August 5, just before the crisis became apparent, to December 5 2007, bank credit at all institutions has grown \$458.3 billion or at a 16.9 percent annual rate. This 17-week advance is much faster than the 7.4 percent rate over the previous 35 weeks, an increase of \$420.7 billion. Clearly credit growth has accelerated. Money funds have also grown rapidly making far more short-term credit available. Institutional money funds surged up \$326.6 billion from July 2007 to November, a 79.1 percent annual rate, up from a \$200 billion rise or 23.5 percent rate in the previous eight months. These two major sources of short term credit have seen explosive growth since the supposed credit crunch began. It is important to bear in mind, however, that while total credit is expanding rapidly, there are areas where borrowers are reluctant or refuse to pay the premiums they would have to pay to continue to secure the short-term credit they had during the summer of 2007. This is especially the case with SIVs and others dependent on asset backed commercial paper.

Outlook

The second prong of the foreclosure crisis, the financial industry effects, remains a threat to overall economy performance. Many analysts fear that a generalized collapse in confidence in lending in credit markets could lead to a recession. Various industry leaders put the risk of recession at nearly a 50-50 bet. For example, on September 27, 2007, Richard Syron, CEO of Freddie Mac, warned that the housing market downturn had led to a 40-45 percent chance of recession. Alan Greenspan in December 2007 put the risk at 50 percent.

Forecasting the size of the future spike in foreclosures is difficult. There is only limited experience with nontraditional loans and subprime loans. Subprime (and alt-A) loans are about 25 percent of all mortgages. At worst, in early 2002, foreclosures on subprime loans hit about 15 percent. A repeat of this experience with the now-larger share of subprime loans could mean that subprime foreclosures alone could raise the overall foreclosure rate by 4 percent. With the remainder running slightly above normal, say around one percent, the overall foreclosure rate would reach about 4.75 percent, almost four times the current rate and the highest since the Mortgage Bankers Association began collecting data. It is not implausible that the foreclosure rate on subprime loans could be far worse, say double the 2002 level, or 30 percent. In that case, the overall foreclosure rate would reach more than 8 percent. Such a level would mean about 1.6 to 3.2 million home loans in foreclosure at the peak and this would have serious consequences for the housing industry, housing prices and, at the top end, for the economy.

An overall foreclosure rate of 5 percent to 8 percent for 2008 would represent, at most, about \$551 to \$882 billion. Virtually all of any losses on these mortgages accrue to lenders and they in turn typically lose up to half the value of the mortgage. So the losses

to lenders could mount to \$275 to \$440 billion. Estimates of losses taken by the largest banks are in the \$30 billion range, so the accounting realization of losses over the next 12 to 18 months has only just begun. But banks do not hold the lion's share of these mortgages, either in the United States or abroad. Moreover, the worst-case loss on foreclosed mortgage loans is not a large number relative to the size of annual growth in wealth, debt and lending, nor is the consequent loss of capital a severe constraint on lending and credit, as some analysts have suggested. Besides, capital constrained lenders can readily reduce investments to boost loans as price signals in competitive markets will instruct them to do. At the end of the third quarter of this year, banks held about \$4 trillion on residential mortgages and home equity loans (\$2.8 trillion) and in mortgage-backed securities (\$1.2 trillion), which is about 30 percent of total banking assets. A loss of half on as many as 5 percent of mortgages and these securities would represent about 1.5 percent of total assets and 15 percent of total equity. None of these figures would pose a serious threat to lending or bank failure in an industry where 99 percent of institutions surpass the highest regulatory capital standards, although some institutions with more concentrated exposure or worse default experience could fail.

Financial markets have exhibited considerable resiliency, but further adverse developments could lead to more turmoil. There is no credit crunch, only isolated and temporary market effects that force credit markets to alter the channel of lending and borrowing. Also, greater awareness of and sensitivity to risk is priced into market interest rates. Unexpected shocks could disrupt the credit market recovery, especially because the foreclosure spike looms out in the future and its full extent and timing remains subject to some uncertainty. It is much too early to determine whether the credit market disruption could have recessionary ef-

fects, though, so far, overall credit supplies do not appear to be much disrupted, nor are most interest rates higher.

Of course after the shocks of August and September 2007, interest rates could rise with recovery in markets or change because of further central bank action or changes in inflation expectations. This year will be important in financial history. It has provided the first major test to financial markets for securitized loans and related financial derivatives, for structured finance programs, and for related business models. It is also the first year of the unraveling of the adjustable-rate mortgage crisis that is expected to dominate housing markets in 2008.

Whether there is a recession arising from these historical events will mainly depend on the continuing resilience of financial markets and the credibility of policymakers to respond quickly and decisively to further credit market disruptions. At least until recently, however, credit market developments do not point to a developing recession.

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Article Summary:**Big Bad Banks?**

Thorsten Beck, Ross Levine, Alexey Levkov
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In their working paper “Big Bad Banks?” done for the World Bank Development Research Group in August 2007, Thorsten Beck, Ross Levine and Alexey Levkov (BLL) take a look at the effects that deregulation in branch banking has had on the distribution of income.

In this article, I summarize and examine the various issues that BLL look at to arrive at their conclusions. Their analysis finds that branch deregulation reduced income inequality by affecting labor market conditions, not by boosting income of the lower income families or enhancing educational attainment. In particular, reductions in the income inequality were noticed between *men and women*, and between *skilled and unskilled workers*.

Arguments favoring regulation generally get support from modern economic theory. If banking takes the path of a natural monopoly, then unregulated, banks charge higher fixed fees, which disproportionately affect opportunities for the poor. Also, by regulating mergers and acquisitions of banks, countries have tried to enhance competition, reduce borrowing costs and expand access to bank loans.

Opponents of deregulation argue that regulation hinders competition thus raising lending fees, thereby hurting the poor. Another school of thought which includes Acemoglu (2007), Haber (2007) and Kroszner and Strahan (1999), suggests that

for political reasons, many regulations are enacted to protect favored groups, not to promote efficiency and economic growth.

Under What Conditions Was Deregulation Most Visible?

Prior studies have found the effect on income through interstate deregulation to be insignificant, hence the authors’ focus on intrastate deregulation. Over the past few decades, many states have reduced several intra-state branching restrictions. Certain conditions were more visible in most states where the effect of branch deregulation was ultimately seen to reduce income inequality. First was the improvement in states that previously had unit banking, where only one full-service banking office is maintained. Secondly was the improvement in states where there had been a higher share of small banks prior to deregulation. Thirdly, there was improvement where there had been a large share of small firms prior to deregulation and, lastly, where states also had a less geographically dispersed population.

Deregulation of branching within states was hastened by technological advancements such as;

1. Invention of automated teller machines (ATMs) – A court ruled that ATMs are not bank branches . This weakened the geographical link between banks and customers.
2. Money market banking facilitated banking by mail and telephone, weakening local monopolies.
3. Improvements in communications technology, which lowered costs of using distant banks.

The speed at which states deregulated was also determined, in addition to the

The speed at which states deregulated was also determined, in addition to the above reasons, by other factors. Some states were slower to act due to influential political groups that considered large multiple-branch banks as competitors.

With the above conditions in mind, BLL discuss the impact of branch deregulation on the distribution of income.

Impacts on Education and Entrepreneurship

In theory, deregulation that reduces credit market imperfections permits poor families to finance their education, thereby reducing income inequality. In addition, the poor generally lack collateral. Deregulation that improves bank efficiency by lowering collateral requirement extends access to bank credit for these families. The analysis performed by BLL provides little proof that branch deregulation has an effect on high school or college education attainment. The education explanation implies a growing effect on distribution of income as the poor attain education. In their study, the effects of branch deregulation were found to level off within six years. This would be too soon to be the result of educational benefits. Regarding the entrepreneurial aspect, although deregulation allowed entry of new firms into business, only a very small portion (about 7%) of entrepreneurial income accounts could be directly attributed to the impact of deregulation on income distribution.

Their findings show that almost 70% of the explained reduction in total income inequality was as a result of reductions in disparity in wage earnings accounts. This enhanced their finding that labor market conditions play a big role when examining effects of deregulation, more so on gender and

skill. Figure 1 breaks down the findings into different components. Deregulation increased the wage income of women and unskilled workers, thus reducing the gender income gap against men and wage income gap against skilled workers respectively. Seventy-five percent of the reduction in inequality related to the gap between skilled and unskilled workers. Also, nearly half of the reduction in income disparity could be pointed to a reduction in the wage income gap between women and men.

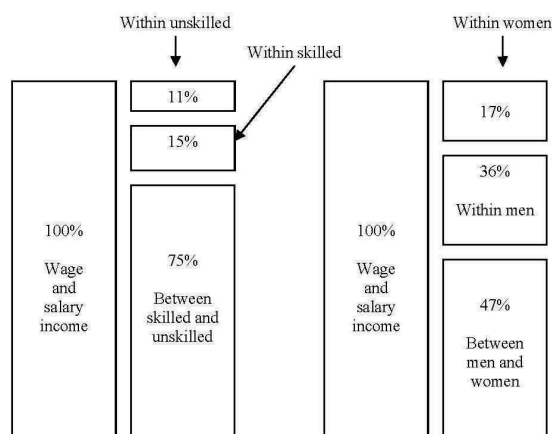


Figure 1: Reduction in Inequality by Skill and Gender

“Big Bad Banks?” offers useful insight regarding the effects of deregulation on income. It opens the door for further discussion in various areas. In what ways can entrepreneurs breaking out of the poverty cycle be protected in order to reduce income inequalities? What policies can be established or refined to ensure that education (especially among the poor) has a positive effect on the distribution of income? Would deregulation in other industries have the same effect?

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Congratulations, Matt! ***Graduate Fellows Program Winds Down***

NFI graduate fellow Matt Muckler graduated with a Masters in Public Administration on December 15th. Matt continues to work with Dr. Carl Klarner and Dr. Stan Buchanan (both with the ISU Department of Political Science) on a research project which addresses state budgeting. The project examines the 1961 to 2006 period in an attempt to assess the causes of states adopting late budgets, that is, after the state fiscal year has already begun. This phenomenon has important consequences for the credit rating of state governments and the efficiency of governmental operations at the state level. A variety of factors are examined to assess whether they are associated with state budgets passing late. These include whether there is a divided state government, how well the economy is doing, and the size of state budget deficits. In the short term, Matt will continue to serve as the Council Administrator for the Vigo County Council. His future plans include a position in intergovernmental services or management within a local government.

With Matt's graduation, NFI's graduate fellows program, as conceived in the original Lilly Endowment grant to Indiana State University, comes to a close. NFI has successfully sponsored four MBA graduates and two students who have graduated from the public administration master's degree program. Congratulations to all our graduate fellows.