Profitwise

News and Views

April 2011

Published by the Community Development and Policy Studies Division of the Federal Reserve Bank of Chicago

Also in this Issue

The asset-backed securities markets, the crisis, and TALF

Overview of the ABS market, the crisis, growth of ABS, and assessing the impact of TALF

FEDERAL RESERVE BANK OF CHICAGO

Profitwise
News and Views

Profitwise News and Views welcomes article proposals and comments from bankers, community organizations, and other readers. It is mailed (either electronically or via U.S. mail) at no charge to state member banks, financial holding companies, bank holding companies, government agencies, nonprofit organizations, academics, and community economic development professionals.

You may submit comments, proposals, or request a subscription by writing to:

Profitwise News and Views
Community Development and Policy Studies
Federal Reserve Bank of Chicago
230 South LaSalle Street
Chicago, IL 60604-1413
or CCA-PUBS@chi.frb.org

Profitwise
News and Views
April 2011

In this edition of *Profitwise News and Views*, we take a closer look at a critically important intervention undertaken by the Federal Reserve during the financial crisis, and its ramifications for borrowers including consumers and small businesses, lenders, financial institutions, and for the nation's credit system. The Term Asset-Backed Securities Loan Facility, TALF, was designed and implemented by the Federal Reserve System. It allowed financial institutions to borrow against asset-backed securities (ABS) on uniform, commonly understood terms after the failure of private sector institutions that had formerly organized the market for ABS, and thereby maintain required liquidity levels while keeping the nation's credit system functional.

We also examine foreclosure rates in five counties, one in each state of our five-state district: Cook County, Illinois; Wayne County, Michigan; Marion County, Indiana; Milwaukee County, Wisconsin; and Polk County, Iowa. These counties contain the largest city in each state, Chicago, Detroit, Indianapolis, Milwaukee, and Des Moines. Among the many reports and papers examining the foreclosure crisis as it impacts different geographies, different measures, such as foreclosure starts, foreclosure inventories, days delinquent, and so on, are used to explain the extent of the problem. The article, "Beyond the foreclosure inventory: the impact of start rates and transition rates in five counties," unpacks some of the variables that make comparisons of foreclosure rates between states a more complex task than it may seem.

Finally, we take a look back at the year 2010, and provide an overview of the work of the Community Development and Policy Studies division, which prior to August 1, 2010, was known as Consumer and Community Affairs, and provide some details on our reorganization.

Beyond the foreclosure inventory:

the impact of start rates and transition rates in five counties[1]

by Robin Newberger and Daniel DiFranco

Introduction

Since 2007, the rate of mortgage foreclosures has risen in all five states (Illinois, Indiana, Iowa, Michigan, and Wisconsin) in the Federal Reserve's Seventh District. Rising foreclosure rates obviously signal problems in housing markets, but the inventory of foreclosed loans, meaning the number of loans under formal foreclosure status at a given moment, actually reflects two actions that occur at distinct phases of the foreclosure process.

The first phase is when mortgages enter into foreclosure, generally at 90 days delinquency. After that point, a mortgage may move out of foreclosure status, as, for example, the servicer institutes a temporary modification or workout plan, or the borrower simply makes a payment before the foreclosure action is complete. The process by which a loan switches from a "non-foreclosed" to a "foreclosed" status can vary depending on the foreclosure procedures in each state; but ultimately, whether it occurs at 90 days delinquent or thereafter, we refer to this change in status as the foreclosure "start rate."

The second phenomenon that affects the proportion of mortgages in foreclosure is the process by which properties "exit" foreclosure. This too varies based on the foreclosure practices in each state, including any suspensions or moratoria placed on loans in the process of foreclosure. We refer to this as the foreclosure transition rate.

These inflow and outflow trends are important because they show that changes in the foreclosure inventory rate are attributable to distinct dynamics that occur at different times, and which themselves vary over time in

Chart 1A: Cook County foreclosures – start rate

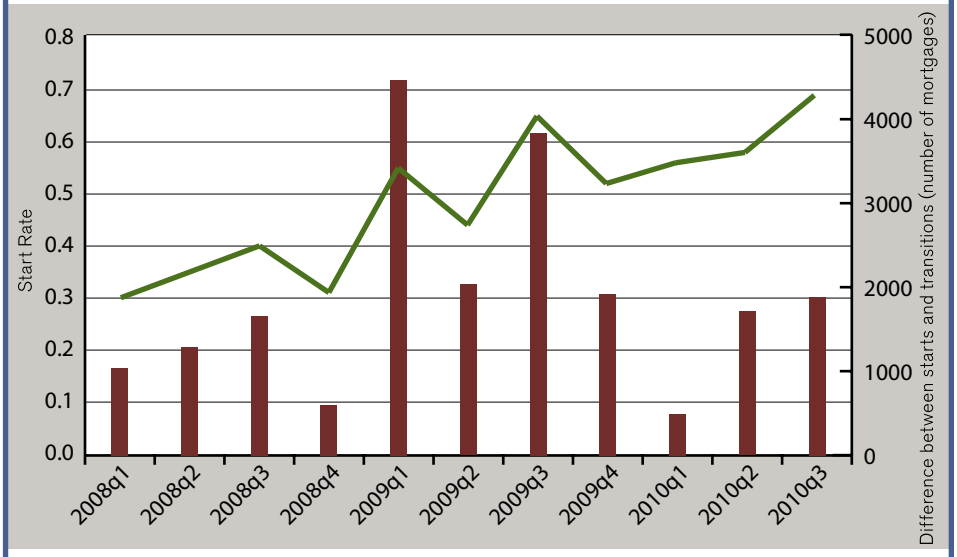
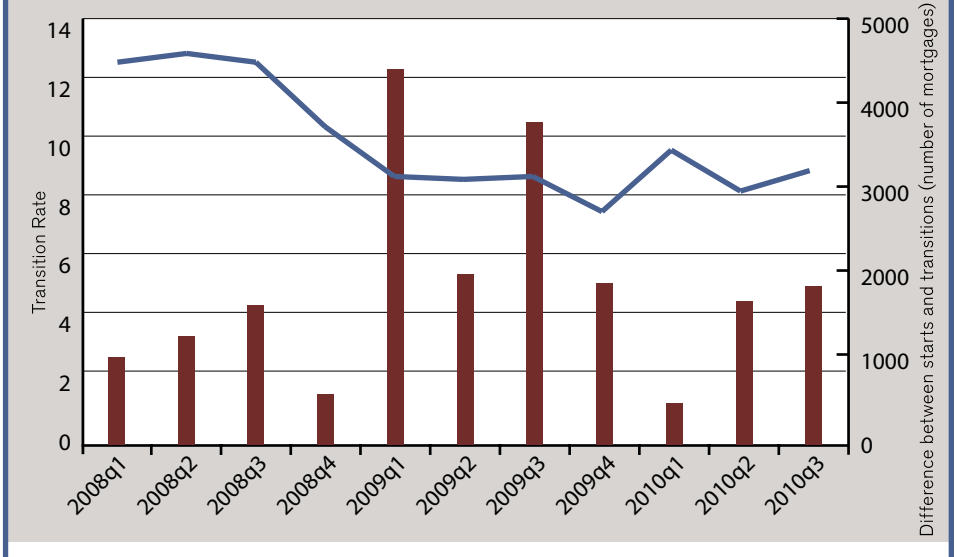


Chart 1B: Cook County foreclosures – transition rate



SOURCE: Lender Processing Services (LPS) and authors' calculations.

any given place. The inflow and outflow trends also make clear that inventory rates are a byproduct of entry and exit processes that differ from place to place, and thus inventory rates should not be used to compare foreclosure incidence in one housing market versus another.

In the first part of this article, we present trends in foreclosure start and transition rates in the largest counties in each state in the Seventh District. These five counties include the cities of Chicago (Cook County), Detroit (Wayne County), Indianapolis (Marion County), Milwaukee (Milwaukee County), and Des Moines (Polk County). This discussion focuses on the changes in the entrance and exit rates that affect the inventory rates in each of these places. In the second part, we compare the start and transition trends across counties. This allows us to note similarities and differences in the foreclosure dynamics between counties, and to observe how the interplay between start rates and transition rates in a given county impact how that county's housing market is evaluated relative to others.

Chart 2A: Wayne County foreclosures – start rate

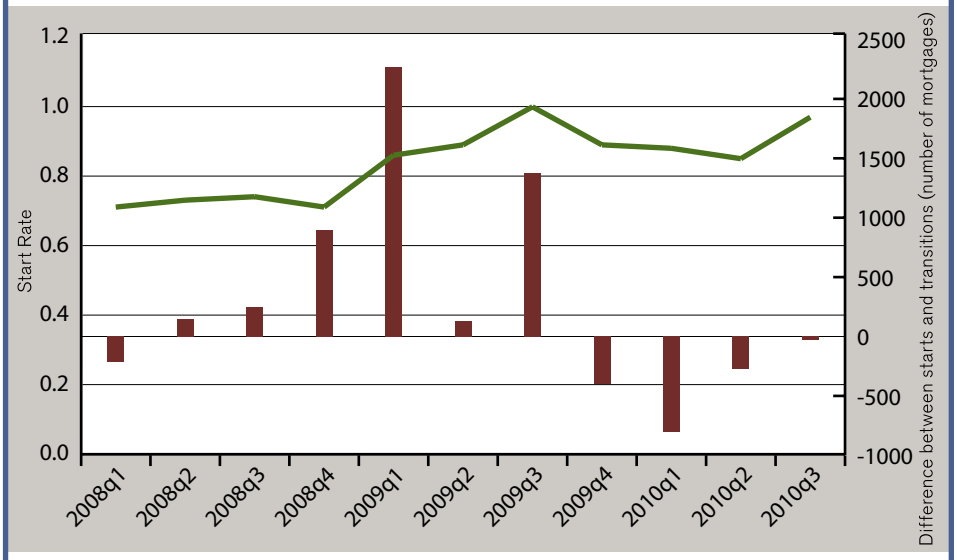
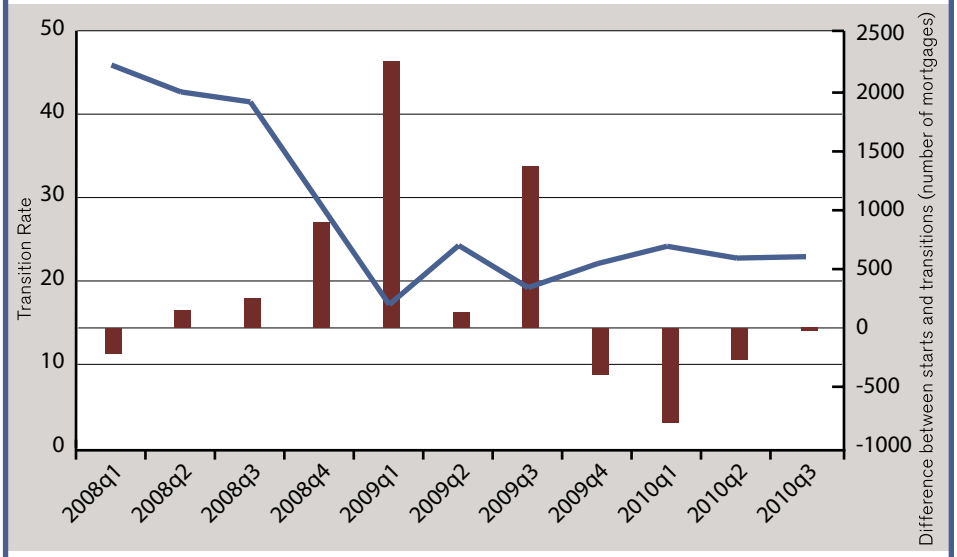


Chart 2B: Wayne County foreclosures – transition rate



SOURCE: Lender Processing Services (LPS) and authors' calculations.

Foreclosure start rates and transition rates by county

Cook County (Illinois)

With an inventory rate of almost 6 percent as of third quarter 2010, the foreclosure rate in Cook County increased by 4 percentage points since the same period two years earlier. A steady stream of loans entering foreclosure is one reason for the rising inventory rate in Cook County. The average foreclosure start rate – the ratio of loans entering foreclosure divided by all loans – increased in both 2009 (by about two-tenths of a percentage point) and 2010 (by about a tenth of a percentage point) (see charts 1a and 1b). In addition, the transition rate – the ratio of loans exiting foreclosure divided by all foreclosures – fell by more than 3.7 percentage points between 2008 and 2010, from about 13 percent of foreclosed loans in 2008 to about 9 percent as of third quarter 2010. The largest drop took place between third quarter 2008 and first quarter 2009. As the (same) bars in both charts show, the overall number of mortgages in foreclosure rises and falls with changes in the start and transition rates.

Wayne County (Michigan)

The foreclosure inventory rate in Wayne County held steady during the first three quarters of 2010, after rising sharply between 2008 and 2009. The foreclosure rate of 4.2 percent was about the same as in Milwaukee County (Wisconsin) and Marion County (Indiana), and below that in Cook County (Illinois). The foreclosure start rate in Wayne County rose by 0.3 percentage points over the period, from 0.7 percent of loans in 2008 to about 1 percent in October 2010, while the foreclosure transition rate dropped by 23 percentage points (see charts 2a and 2b). Whereas foreclosure exits (i.e., transition rate) used to run at 40 percent or higher per quarter, transition rates fell to about half of that beginning in 2009.

Marion County (Indiana)

The foreclosure inventory rate in Marion County, which includes the city

Chart 3A: Marion County foreclosures – start rate

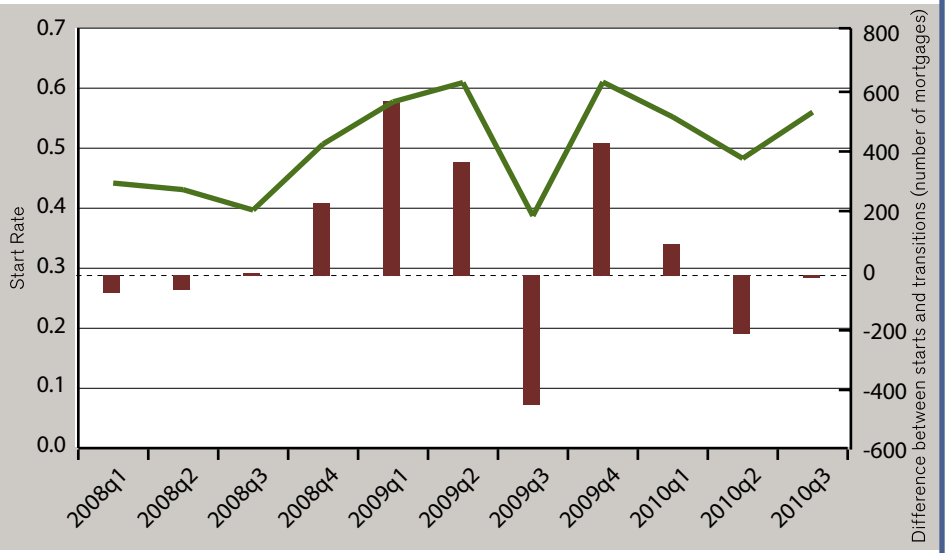
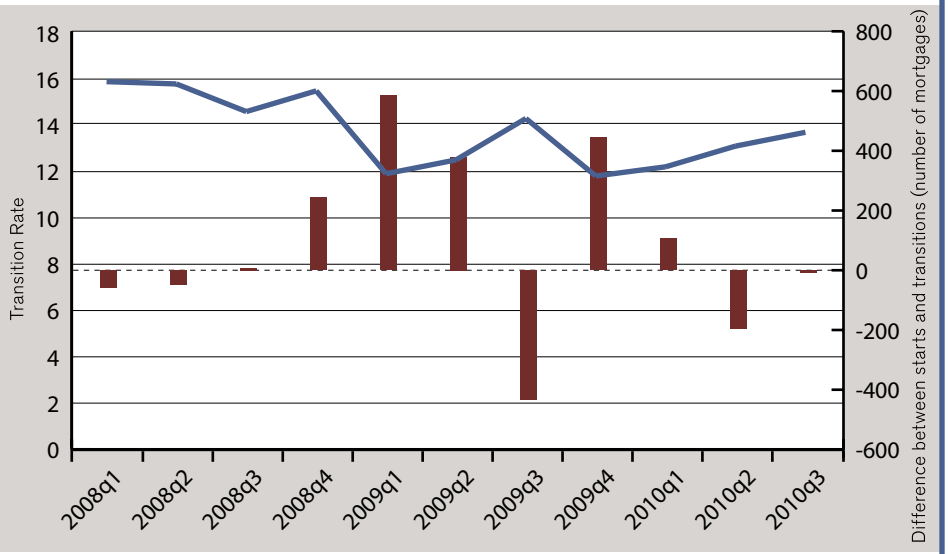


Chart 3B: Marion County foreclosures – transition rate



SOURCE: Lender Processing Services (LPS) and authors' calculations.

of Indianapolis, also rose between 2008 and 2010. The inventory rate increased from 2.8 percent in 2008 to 4 percent in October 2010. Foreclosure starts showed a slight rise between 2008 and 2010, bouncing around 0.5 percent for the period (see charts 3a and 3b). The transition rate fell by about two percentage points between 2008 and 2010, from about 15 percent of foreclosed loans to about 13 percent.

Milwaukee County (Wisconsin)

Milwaukee County's inventory rate has risen over the past few years, although the pace of the increase slowed in 2010. The inventory stood at 4 percent in October 2010, compared to 2.4 percent at the beginning of 2008. Foreclosure starts actually averaged about the same in 2010 as in 2009 (approximately 0.5 percent of mortgages), and average transition rates were also similar at around 12 percent in 2009 and 2010 (see charts 4a and 4b). Transition rates had averaged around 15 percent in 2008.

Polk County (Iowa)

In Polk County, the foreclosure inventory rate has risen moderately over the past two years. It changed from an average of 1.6 percent in 2008 to 2.7 percent in 2010. The foreclosure start rate has been relatively flat over this period. It hovered around 0.2 of a percent in 2008 and rose a tenth of a percent by 2010 (see charts 5a and 5b). The transition rate in Polk County also fell moderately during this period, from about 11 percent in 2008 to about 10 percent in 2009.

For more information on the foreclosure process timeline by Seventh District state, go to www.chicagofed.org/digital_assets/publications/profitwise_news_and_views/2011/foreclosure_process_timeline.pdf.[2]

Interpreting start rates and transition rates across counties

Foreclosure starts and transitions show some common patterns across counties. Overall, foreclosure start rates climbed between 2008 and 2010 (the increase actually dates from before then). Three of the five counties also experienced a steep drop in transition rates in late 2008 and early 2009. And as start rates rose and transition rates fell, each of the counties saw an uptick in foreclosure inventory rates. These common patterns suggest that distinct housing markets have been influenced by some common forces over the period. These include the suspension in foreclosure sales by Fannie Mae and Freddie Mac at the end of 2008, the extension of foreclosure mediation processes for delinquent borrowers, and the overall weakening of the economy at the end of 2008 and 2009.

The start and transition rates reveal some obvious differences in foreclosure dynamics as well. The actual levels of the rates varied substantially across counties (see table 1). Start rates ranged from an average of 0.26 in Polk County to an average rate of 0.84 in Wayne County. The fact that the start rate is based on all (non-foreclosed) mortgages means that seemingly small differences in start rates represent large differences in the number of loans actually entering foreclosure. Approximately one out of every 100 residential mortgage in Wayne County that wasn't already in

foreclosure in the previous month entered into foreclosure in October 2010. In Marion County, the rate was approximately one out of every 200 mortgages, and in Polk County, it was one out of every 333 mortgages.

The level of transition rates also ranged widely between counties. They ranged from an average of 10 percent in Cook County to approximately 28 percent in Wayne County between 2008 and 2010. In October 2010, approximately 23 out of every 100 loans that were already in foreclosure in Wayne County transitioned out of foreclosure, while approximately nine out of every 100 loans transitioned in Cook County.

In addition to the differences in individual rates, the movement between start rates and transition rates varied between counties. In Wayne County, the start rate climbed by 36 percent over the period while the transition rate fell by 50 percent. In Marion County, the start rate climbed by 27 percent while the transition rate fell by 15 percent. The rise in the inventory rate was therefore higher in Wayne County (1.6 percent over the period) compared to that in Marion County (0.4 percent for the period).

These differences demonstrate that two locations could potentially have different foreclosure (inventory) rates because their entry and exit rates fluctuate relative to each other, and not because one has a higher or lower incidence of foreclosure. For example, if Cook County's average transition rate in 2010 were substituted for that in Wayne County, Wayne County's foreclosure (inventory) rate would climb by an additional 0.5 percentage point, compared to the rate it would show if it continued with its existing 2010 transition rate (holding the start rate constant).

Finally, it is worth noting that the circumstances that precede or follow these starts and transitions in each county have different implications for longer term foreclosure trends. In Wayne County, almost two-thirds of the loans (that could be tracked in our data)

Chart 4A: Milwaukee County foreclosures – start rate

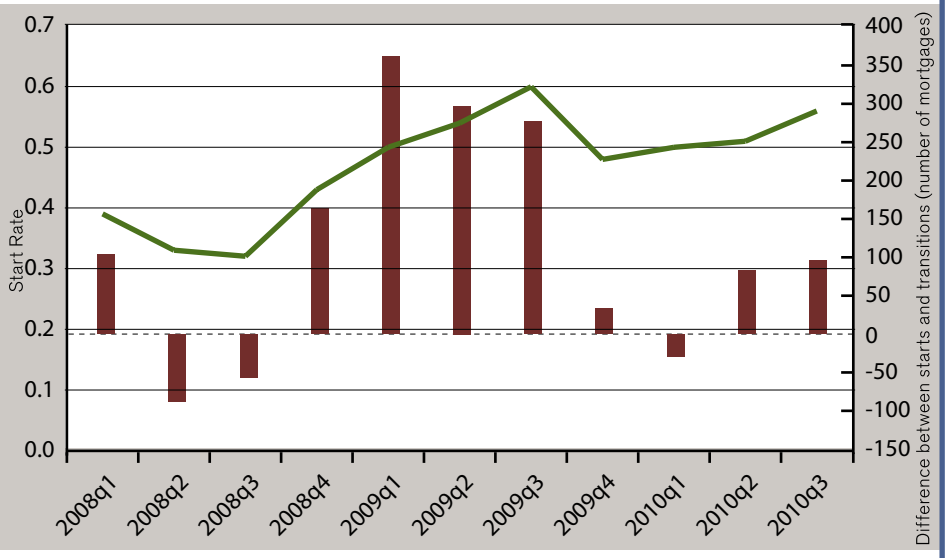
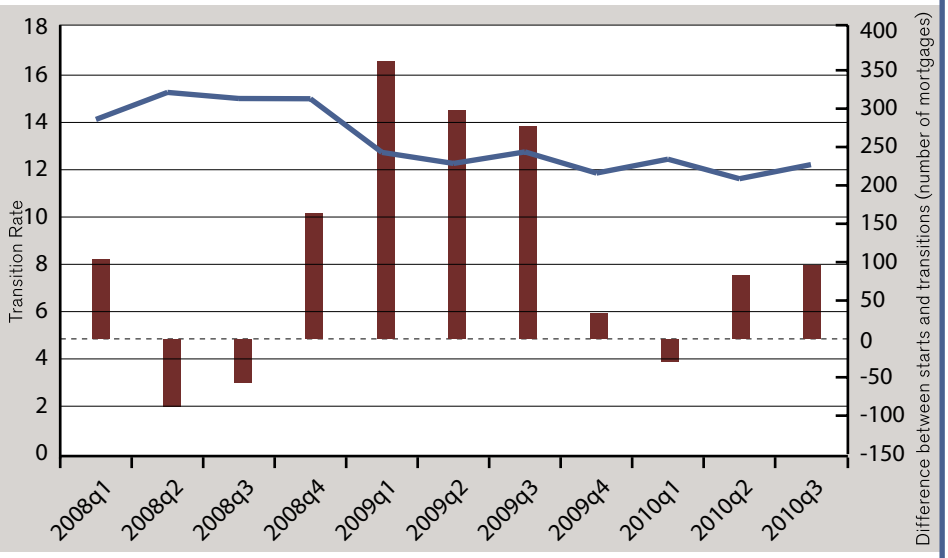


Chart 4B: Milwaukee County foreclosures – transition rate



SOURCE: Lender Processing Services (LPS) and authors' calculations.

Table 1: Average start and transition rates 2008-2010

	Cook	Wayne	Marion	Milwaukee	Polk
2008 Avg Start Rate	0.34	0.72	0.45	0.37	0.20
2009 Avg Start Rate	0.54	0.91	0.55	0.53	0.27
2010 Avg Start Rate	0.61	0.90	0.53	0.52	0.32
2008 Avg Trans Rate	12.44	39.86	15.47	14.86	10.77
2009 Avg Trans Rate	8.69	20.66	12.62	12.40	11.13
2010 Avg Trans Rate	9.23	23.26	13.01	12.09	10.25

Source: Lender Processing Services (LPS) and authors' calculations.

Chart 5A: Polk County foreclosures – start rate

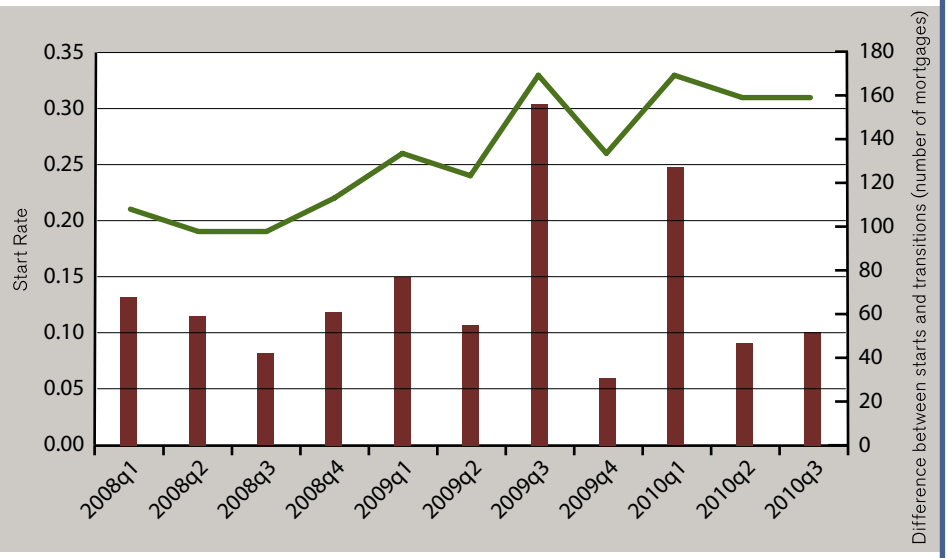
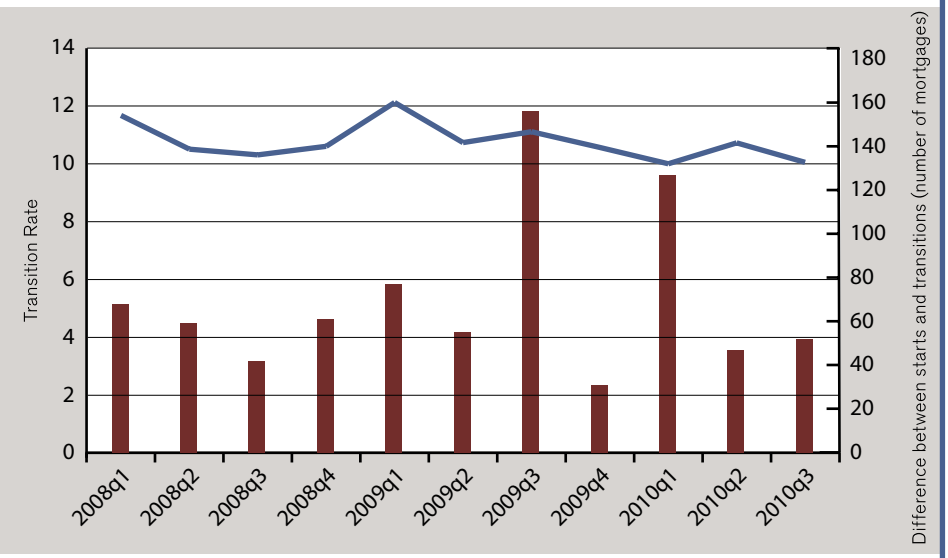


Chart 5B: Polk County foreclosures – transition rate



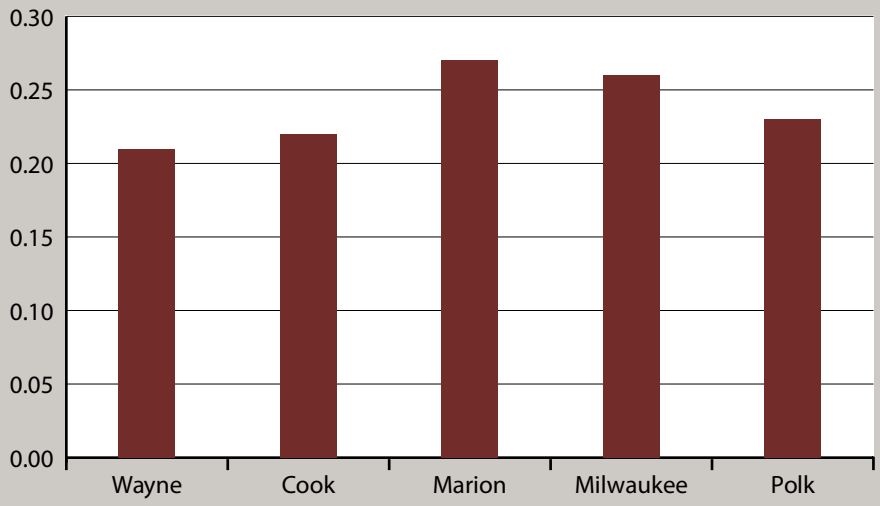
SOURCE: Lender Processing Services (LPS) and authors' calculations.

became Real Estate Owned (REO) by the lending institution after leaving foreclosure. By comparison, about 45 percent of loans (that could be tracked) in Cook County went into REO status, but almost 40 percent were re-classified as delinquent and 13 percent re-classified as current. Loans that transition to REO status are unlikely to go back into the foreclosure pipeline (although these properties feed into the inventory of REOs). In contrast, loans that are classified as "delinquent" and "current" post-foreclosure may be considered performing loans in the post-transition period, even if they are *likely* to return to a foreclosed status in the near future. As chart 6 shows, between a fifth and a quarter of "transitioned" loans in each of the counties had transitioned out of foreclosure at least once before. The variety of transition outcomes help make the point that the classification of a "start" or a "transition" can itself reflect the idiosyncrasies of the foreclosure process in a local area.

Conclusion

This article examines foreclosure starts and transitions to provide a better understanding of the dynamics causing the change in inventory rates, and to provide a more nuanced comparison of the foreclosure rates between different places. The rise in inventory rates across five counties in the Seventh District between 2008 and 2010 reflects both a gradual increase in start rates and a (sometimes abrupt) decline in transition rates. In some periods, and in some counties, the change in start rates appears to drive the net change in inventory, while in others, the drop in transition rates are the more important factor. This analysis suggests that a comparison of foreclosure inventories should take into account both the fluctuation in starts and transitions within a given place, as well as the distinct interplay between these rates in other counties.

Chart 6: Previous foreclosure transition



SOURCE: Lender Processing Services (LPS) and authors' calculations.

Notes

1 This article draws on a discussion found in "Foreclosure Metrics" by the Federal Reserve Bank of Cleveland, and on charts prepared by the Federal Reserve Bank of New York. See http://www.clevelandfed.org/research/commentary/2009/0409.cfm and http://data.newyorkfed.org/creditconditions.

2 States like Illinois, Indiana, Iowa, and Wisconsin carry out foreclosures through the courts (judicial process). Michigan foreclosures take place without having to go to court (non-judicial process). Judicial vs. non-judicial processes affect the length of time it takes for loans to work their way through the foreclosure process.

Biographies

Robin Newberger is a senior business economist in the Community Development and Policy Studies department of the Federal Reserve Bank of Chicago. She holds a BA from Columbia University and a master's in public policy from the John F. Kennedy School of Government at Harvard University. She is a holder of the Chartered Financial Analyst designation.

Daniel DiFranco is a senior associate economist in the Community Development and Policy Studies department of the Federal Reserve Bank of Chicago. Mr. DiFranco holds a BA in sociology from the College of the Holy Cross, and an MA in applied economics from the University of Michigan.

The asset-backed securities markets, the crisis, and TALF

by Sumit Agarwal, Jacqueline Barrett, and Mariacristina De Nardi

Introduction and summary

Credit performs the essential function of moving funds from the savers who want to lend to the investors and consumers who wish to borrow. Under ideal conditions, this process ensures that funds are invested by the most skilled and productive individuals, thus improving efficiency and stimulating growth, and that consumers can get funds when they need them the most to satisfy their consumption needs.

Many different instruments of borrowing and lending have emerged to better address the needs of borrowers and lenders. One of these instruments, asset-backed securities (ABS), is a type of bond backed by the cash flow of pooled receivables or loans. ABS can be securities backed by any type of asset with an associated cash flow, but are generally collateralized by certain types of consumer and business loans, as well as subprime mortgages (high-risk loans to borrowers with blemished credit histories), as opposed to mortgage-backed securities, which are backed (generally) by prime mortgages that conform to high credit and collateral standards. Firms issue ABS to diversify sources of capital, borrow more cheaply, reduce the size of their balance sheets, and free up capital.

ABS issuance grew steadily for two decades, increasing credit market liquidity and reducing the cost of financing. From an annual issuance of $10 billion in 1986, the ABS market grew to an annual issuance of $893 billion in 2006, its peak in the U.S.[1] This growth was accompanied by expansion in the ABS market investor base from banks and institutional investors to hedge funds and structured investment vehicles (SIV).

The growth in ABS came to a sudden halt with the financial crisis that started in 2007, which was characterized by a global credit crunch. The crisis began with a decline in house prices and an increase in mortgage defaults, particularly on subprime mortgages. Uncertainty quickly spread to other consumer loan markets, such as those based on car loans, credit cards, and student loans. In July 2007, ABS issues backed by residential mortgages dried up. The failure of Lehman Brothers – a major actor in the ABS market – in October 2008 was a shock to the financial markets and to investor confidence; in the aftermath of Lehman's collapse, yields on ABS increased sharply. In a high-yield environment, there was no economic incentive for lenders to issue new ABS. Consumer ABS (auto, credit card, and student loan segments) and commercial mortgage-backed securities markets[2] issuances – once a vibrant financial channel linking borrowers and lenders – ceased.

The Board of Governors of the Federal Reserve System recognized the importance of a healthy supply of credit and of the role of ABS markets in this process. To get these markets working again, the Board introduced the Term Asset-Backed Securities Loan Facility (TALF) on November 25, 2008. The official document announcing the facility stated: "The ABS markets historically have funded a substantial share of consumer credit and SBA-guaranteed small business loans. Continued disruption of these markets could significantly limit the availability of credit to households and small businesses and thereby contribute to further weakening of U.S. economic activity." The same document also explained that the TALF was "intended to assist the credit markets in accommodating the credit needs of consumers and small businesses by facilitating the issuance of asset-backed securities (ABS) and improving the market conditions for ABS more generally."

TALF facilitated issuance of new ABS and, importantly, provided a safety net by allowing people holding ABS products to borrow using the securities as collateral – although not (ordinarily) at face value. This facility provided ABS investors the means to satisfy their liquidity needs, and a level of certainty (for qualified borrowers) as to end loan value based on a set pricing schedule

defining both "haircuts" – discounts – and underlying values to which they were applied based on security terms and collateral. This arrangement provided a crucial backstop against irrational fears lowering the value of these assets below what one could expect based on reasonable fundamentals.

In this article, we analyze the role of ABS markets in generating credit and liquidity. We study how this role was disrupted during the crisis, and we argue that TALF successfully helped reestablish the ABS markets and the credit supply.

First, we describe how ABS products work, the growth of the market for these products, and its collapse. Then we show that TALF helped calm the markets, restart ABS issuance and reduce credit spreads, thus helping to reestablish a healthy credit supply to the markets.

Overview of the ABS market

How does securitization work? The essence of securitization is pooling and tranching. After pooling a set of assets, the originator creates different classes of securities, known as tranches, which have prioritized claims against the collateral pool. In a tranched deal, some investors hold more senior claims than others. In return for greater risk, the lower tranches have higher yield than the senior tranches. In the event of default, the losses are absorbed by the lowest priority class of investors first, followed by each higher tranche in succession. Thus, the pooling and tranching create some securities that are safer than the average asset in the collateral pool and some that are much riskier. Securitization structures are also designed to isolate loans from the bankruptcy or insolvency risks of the other entities involved in the transaction.

As a matter of course, issuers have much more intimate knowledge of the credits underlying the securities (and thereby expected performance) than investors. To help inform investors and the market at large, rating agencies analyze ABS bonds and attach credit ratings to their various tranches. The use of credit ratings in the regulation of financial institutions created a large demand for highly rated (especially AAA) securities. Securitization allowed investors to participate in asset classes to which they would otherwise not have had access. For example, an investor that was not permitted to buy B-rated corporate bonds could invest in AAA-rated ABS securities that were issued on a pool of B-rated corporate bonds, which would typically yield more than bonds rated A or higher.

In order to receive higher credit ratings and thus decrease marketability and financing costs, ABS products require credit enhancements. Enhancements can be internal, external, or a combination of both. Common external credit enhancement facilities include cash collateral accounts (cash invested in high-quality, short-term commercial paper offered as collateral in addition to the nominal collateral), third-party letters of credit, and reserve accounts. Internal credit enhancement facilities can include senior/subordinated certificates (tranching), excess finance charges, spread accounts (where the yield on the security is lower than the yield on the underlying loans and the difference accumulated in a separate account to offset losses), and over-collateralization – where the principal on underlying credits exceeds the principal value of the security issue (Fitch Ratings, 2006).

Growth of ABS

The ABS market, which had a prominent role in the recent financial crisis, evolved over the course of several decades. Before the 1970s, banks usually held loans on their balance sheet until they matured or were paid off. The loans were primarily funded by bank deposits, and depository institutions mainly provided credit to areas where they accepted deposits. As a result, geographical imbalances in the flow of credit to borrowers emerged (Sellon and VanNahmen, 1988). Although investors traded whole loans, the market was relatively illiquid; mortgage lenders faced the risk that they would not find investors to purchase the whole loans, as well as the risk that interest rates could change.

The introduction of securitization addressed several of the shortfalls in the housing market in particular. In 1970, the first form of securitization was brought to the marketplace. At this time, the Government National Mortgage Association (GNMA) introduced government-insured pass-through securities, in which the principal and interest payments were passed from borrowers to investors who purchased bonds that were backed by Federal Housing Administration and Veterans Administration 30-year single-family mortgages (Sellon and VanNahmen, 1988; Ergungor, 2003). The launch of pass-through securities provided several advantages. Investors could buy a liquid instrument that was free of credit risk. Lenders could move any interest rate risk associated with mortgages off their balance sheet and make additional loans with the new capital that they received from securitizing older loans. Businesses and consumers faced lower borrowing costs and were given increased access to credit as the geographical inefficiencies previously present were eliminated. One of the drawbacks to these new securities is that they were unable to accommodate different risk preferences and time horizons of investors.

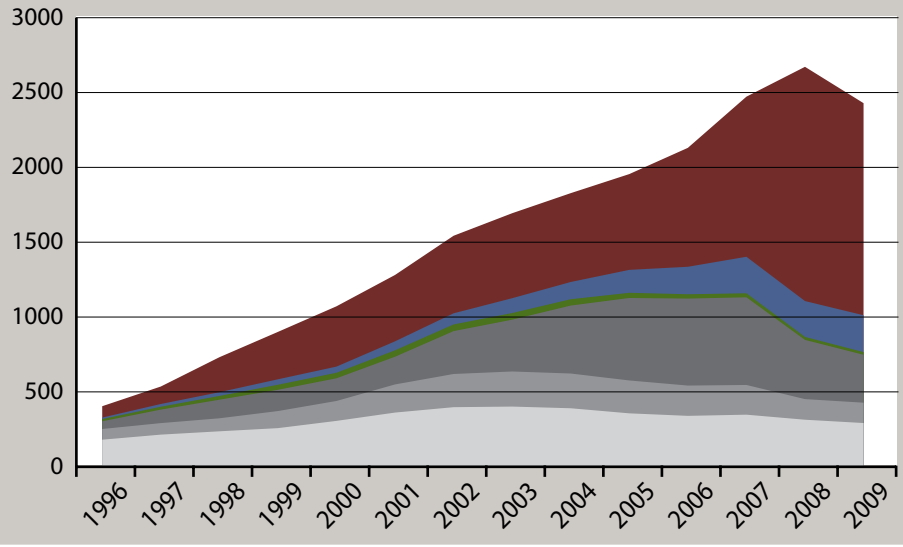
The mortgage market continued to evolve with the issuance of the first private-label mortgage pass-through security by Bank of America in 1977, and the first collateralized mortgage obligation (CMO) by the Federal Home Loan Mortgage Corporation (FHLMC) in 1983. CMOs addressed an important risk of owning pass-through securities—prepayment risk. Prepayment risk is the

unexpected early return of principal as a result of refinancing. Borrowers are most likely to refinance when interest rates fall and investors are forced to reinvest the returned principal at a lower return than they previously expected. CMOs lowered prepayment risk for certain investors by providing different classes (tranches) of securities that offered principal repayment at varying speeds. The introduction of tranches in CMOs set the stage for more sophisticated debt vehicles that were tailored to the risk preferences of different types of investors (Ergungor, 2003).

In the mid 1980s, securitization techniques that were developed for the mortgage market were applied to nonmortgage assets. Other types of receivables such as auto loans and equipment leases involved predictable cash flows, which made them attractive for securitization. Banks also soon developed structures to normalize the cash flows of credit card receivables, facilitating the creation of credit card ABS. In order to provide additional protection to investors on these securities, which were not government-insured, the pools of assets were over-collateralized, so that the value of the underlying loan portfolio was larger than the value of the security. Additional credit enhancements, such as the excess spread, the creation of reserve accounts, and letters of credit, were also implemented. The purpose of these credit enhancements was to limit losses for investors in the event of defaults. The market grew to include the securitization of additional asset types, including home equity loans, manufactured housing loans, and student loans.

The ABS market increased dramatically from 1996, when the value of outstanding securities was $404.8 billion, to 2008, when the value of outstanding securities reached $2,671.8 billion (figure 1). Although each type of security exhibited growth during this period, the largest expansions were seen in home equity ABS, student loan ABS, and collateralized debt obligations (CDOs), which are securities that can be backed by several different types of debt. Securities backed by credit card receivables made up the largest portion of ABS in 1996; by 2009, home equity ABS and CDOs made up the bulk of the

Figure 1: Total ABS outstanding ($ billions)



SOURCE: Securities Industry and Financial Markets Association.
*Other includes collateralized debt obligations of ABS.

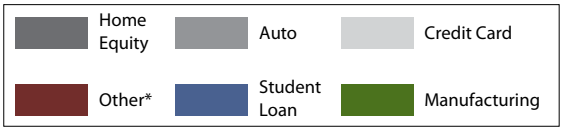
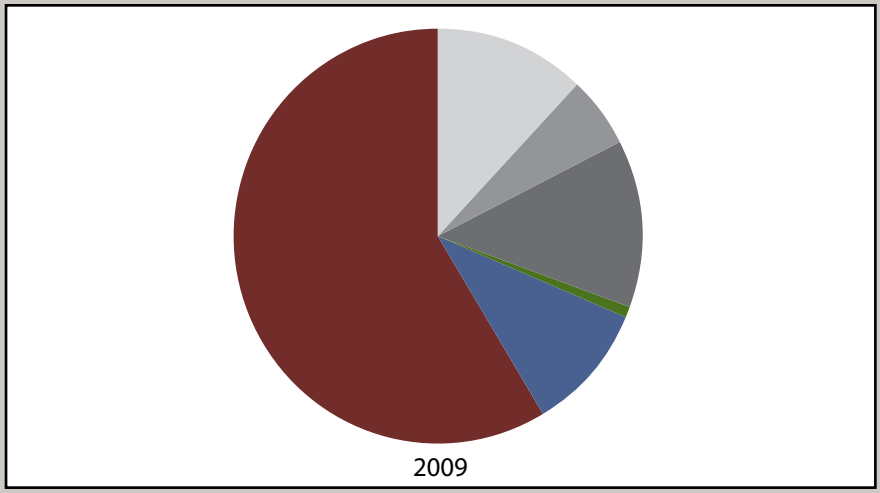
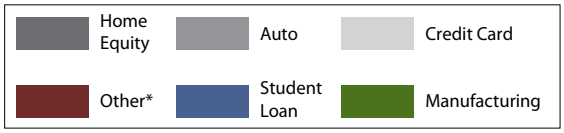


Figure 2: 2009 U.S. ABS outstanding by segment ($ billions)



SOURCE: Securities Industry and Financial Markets Association.
*Other includes collateralized debt obligations of ABS.



market (figure 2). The value of monthly ABS issuance also increased steadily until June 2006, when it peaked at $110 million (figure 3, panel A).

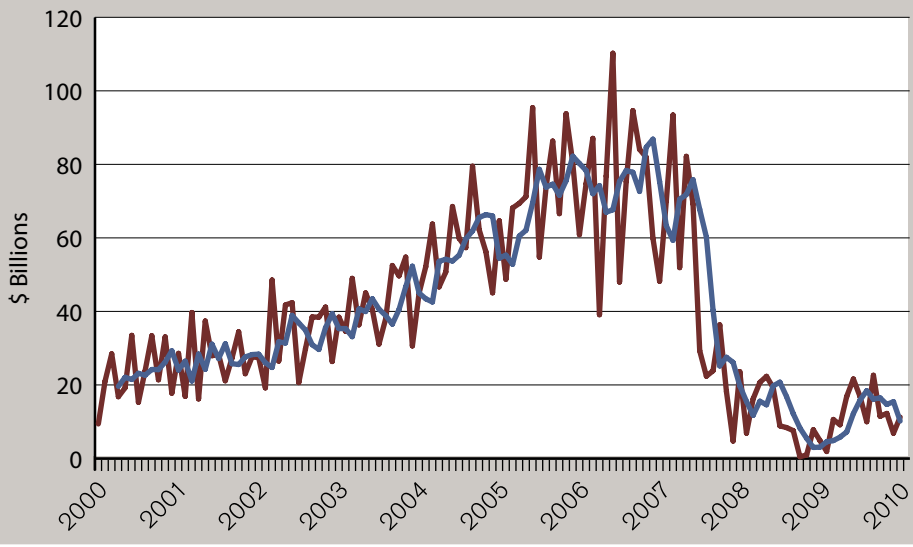
The crisis

The formation and bursting of the housing bubble played an important role in starting and subsequently deepening the financial crisis. Among the factors contributing to the housing bubble were programs aiming at increasing home ownership, low interest rates, and reduced credit standards.

For decades, increasing home ownership has been a government policy objective, implemented through subsidies, tax breaks, and dedicated agencies. These policy interventions, coupled with historically low interest rates, encouraged unprecedented borrowing. As home prices surged, many households borrowed against the value of their homes by refinancing mortgages or taking out home equity lines of credit. At the same time, the banks that originated the loans were selling them rather than keeping them on their balance sheets. By securitizing mortgages, banks were able to originate more mortgages, but the quality of these mortgages deteriorated as the quantity increased. Lenders allowed borrowers with poor credit to purchase homes with low or no down payments. The credit rating companies compounded the problems by rating the ABS securities under the assumption that house prices would keep appreciating. This critical assumption turned out to be false (Sabry and Okongwu, 2009).

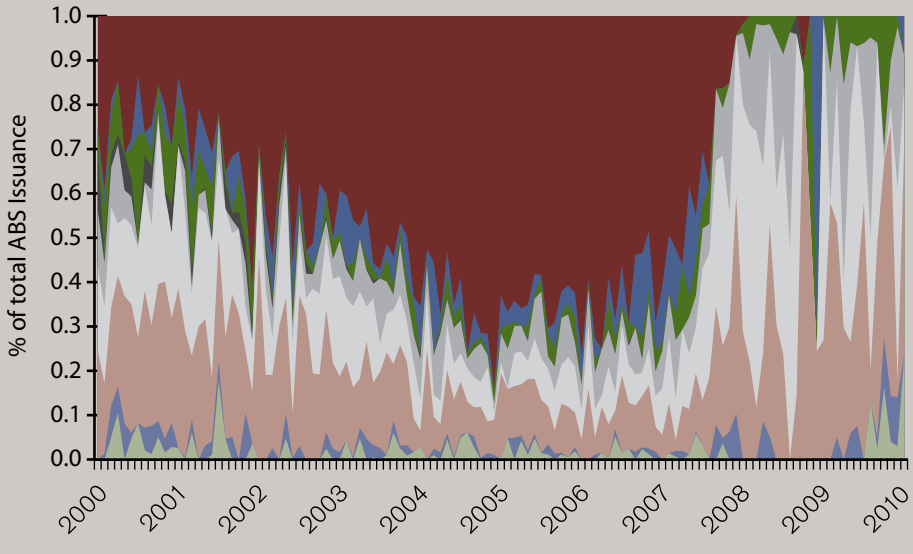
In 2007, the housing market started to decline: home sales and construction starts slowed, home prices dropped, and interest rates began to rise. Defaults on subprime loans, especially those that had not required a down payment or income verification, started to surge. As interest rates started rising, adjustable mortgages started to reset at higher levels and fears spread that foreclosures would increase. Lenders and mortgage buyers responded to the defaults by tightening credit standards. Several subprime lenders suffered losses and eventually were forced to file for bankruptcy. As it became clear that many of the mortgages in default had been securitized, the previously highly-rated securities were downgraded, causing demand for outstanding asset-backed securities to collapse. At the same time, a banking panic in the sale and repurchase agreement (repo) market forced banks to sell their assets

Figure 3A: Monthly ABS Issuance (with rolling 3-month average)



SOURCE: JP Morgan.

Figure 3B: ABS Issuance by Sector



SOURCE: JP Morgan.

at unfavorable prices (Gorton and Metrick, 2009). There was also a sharp decline in the issuance of new housing-related securities. Although securities backed by housing-related collateral made up the majority of new ABS issuances in 2005 and 2006, starting in 2007, issuances for housing-related securities dried up (figure 3, panel B). By 2008, securities that were backed by student loans, credit card receivables, and automobile loans made up the majority of new ABS issuance because there were so few securities backed by real estate loans.

Benmelech and Dlugosz (2009, 2010) show that the deterioration in the credit ratings of structured financial products began in 2007, when there were more than 8,000 downgrades, an eightfold increase over the previous year. In the first three quarters of 2008, there were almost 40,000 downgrades, which overshadowed the cumulative number of downgrades since 1990. In 2007, downgrades were not only more common, but also more severe. The average downgrade was 4.7 notches (defined as the distance between two adjacent ratings) in 2007 and 5.8 notches in 2008, compared with an average 2.5 notches in both 2005 and 2006.

When the market broke down, the banks that were holding securities off their balance sheets until their expected sale were forced to bring them back onto their balance sheets under provisions in the original ABS issuance contracts. These banks incurred large and unplanned regulatory capital charges. At a time when these institutions needed to raise new capital to cover the losses, investors were unwilling to provide it, except at a very large premium. These problems were further exacerbated by the fact that financial firms were reluctant to lend to each other. The insolvencies that emerged led to additional distress through defaults on payment obligations. The credit crisis caused the demise or bailout of Bear Stearns, Lehman Brothers, Fannie Mae, Freddie Mac, Merrill Lynch, Washington Mutual, Wachovia, AIG, and many other financial institutions around the world.

Assessing the impact of TALF

At the height of the crisis in the fall of 2008, following the collapse of Lehman Brothers, interest rate spreads on AAA-rated tranches of ABS skyrocketed to historical highs, reflecting unusually large risk premiums. Issuance of ABS slowed to a trickle in September and October, significantly limiting the availability of credit for small businesses and households. These market disturbances further weakened the U.S. economy (Dudley, 2009).

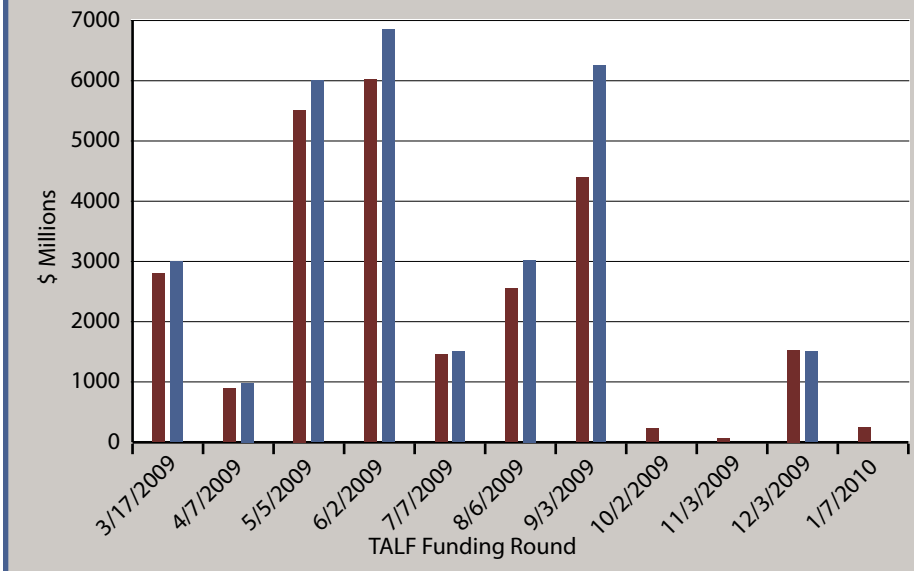
On November 25, 2008, the Federal Reserve announced the creation of the Term Asset-Backed Securities Loan Facility (TALF). This program was designed to meet the credit market needs of households and small businesses by facilitating the issuance of ABS collateralized by auto loans, student loans, credit card loans, and loans guaranteed by the SBA. The aim of the program was to stimulate demand for ABS in order to lower the cost and increase the availability of new credit. Under the terms of this program, the Federal Reserve Bank of New York would lend up to $200 billion to holders of AAA-rated ABS, backed by newly originated loans from the designated sectors. The New York Fed would lend an amount equal to the market value of the ABS less a fraction of their value, called a "haircut." The haircuts served as a form of credit protection and minimized the risk that the borrower would not repay the loan if the assets that they pledged for collateral declined in value. These non-recourse loans would have a term of one year and be secured by the ABS. The TALF would stop making new loans on December 31, 2009, unless the Federal Reserve found it necessary to extend the program. In addition, the Treasury Department would provide $20 billion as an additional form of credit protection to the New York Fed to protect against the possibility that the loans would not be repaid (Board of Governors, 2008b).[3]

In the subsequent months, additional changes were made to TALF. On December 19, 2008, the maturity of TALF loans was extended from one year to three years. On February 10, 2009, the Federal Reserve announced that, along with the Treasury Department, it was prepared to expand the scope and size of TALF. Under the Treasury's Financial Stability Plan, the Treasury would use $100 billion to leverage up to $1 trillion in lending (up from the previous levels of $20 billion and $200 billion, respectively). On March 17–19, 2009, the first TALF operation was conducted – the total amount of TALF loans settled was $4.71 billion, split between $1.91 billion in auto loans and $2.8 billion in credit card loans.

The Federal Reserve announced on March 19, 2009, that the set of collateral eligible for loans through TALF would be further expanded to include residential mortgage servicing advances, loans backed by business equipment, floor plan loans, and vehicle fleet leases. Soon after, the list was further expanded to include commercial mortgage-backed securities (CMBS) and insurance premium finance loans. The CMBS market had ground to a halt in mid-2008, and the inclusion of CMBS for TALF loans was designed to prevent defaults on viable properties and facilitate the sale of distressed properties. On May 19, the Federal Reserve said that beginning in July, certain commercial mortgage-backed securities issued before January 1, 2009, would be eligible collateral for TALF loans.

On August 17, 2009, the Federal Reserve and Treasury announced an extension to TALF. Newly issued ABS and legacy CMBS would be eligible to receive TALF money through March 31, 2010, and newly issued CMBS would be eligible to receive loans through June 30, 2010.

Figure 4: Credit card ABS issuance backed by TALF



SOURCE: Federal Reserve Bank of New York

TALF Loans Settled | TALF Eligible Issuance

Market volatility before November 2008, lack of stability in the mortgage market, and the absence of a consistent subordinated market were important factors generating the need for the TALF program. TALF helped unlock ABS issuance by providing a backstop to market uncertainty and fears by providing credit to people holding eligible ABS products. This helped generate some new ABS issuances. Figure 4 displays TALF-eligible credit card issuances and TALF credit card loans settled, starting from the first TALF issuance. The graph shows a close match between the two: basically all credit card TALF-eligible loans received TALF support, with the difference being explained by the required haircut.

There was, to be sure, ABS market activity outside TALF, and it is likely that the TALF program still had a lot to do with the success of these offerings by providing a floor to the market. In this way, TALF may also have had a beneficial effect on non-TALF deals by helping to reduce spreads and decrease market volatility more broadly.

Since the introduction of TALF, ABS interest rate spreads have narrowed from historical highs in the fourth quarter of 2008, which suggests a significant improvement in liquidity and availability of credit in the market. Before the creation of TALF, spreads soared to up to 600 basis points for auto ABS and 550 basis points for credit card ABS. Soon after the creation of TALF on November 28, 2008, spreads dropped by over 200 basis points in both of these sectors. After the announcement that TALF could be expanded to up to $1 trillion, and the first TALF operation was conducted, these spreads continued to fall for both types of securities. The markets also responded favorably to additional announcements that expanded the set of collateral eligible for TALF loans to include residential mortgage servicing advances, business equipment loans, floor plan loans, vehicle leases, CMBS, and legacy CMBS. By the time TALF was extended for three additional months for newly issued ABS and legacy CMBS, and six additional months for newly issued CMBS, spreads were only about 50 basis points above historical levels. At the completion of TALF, spreads had fallen to approximately pre-crisis levels.

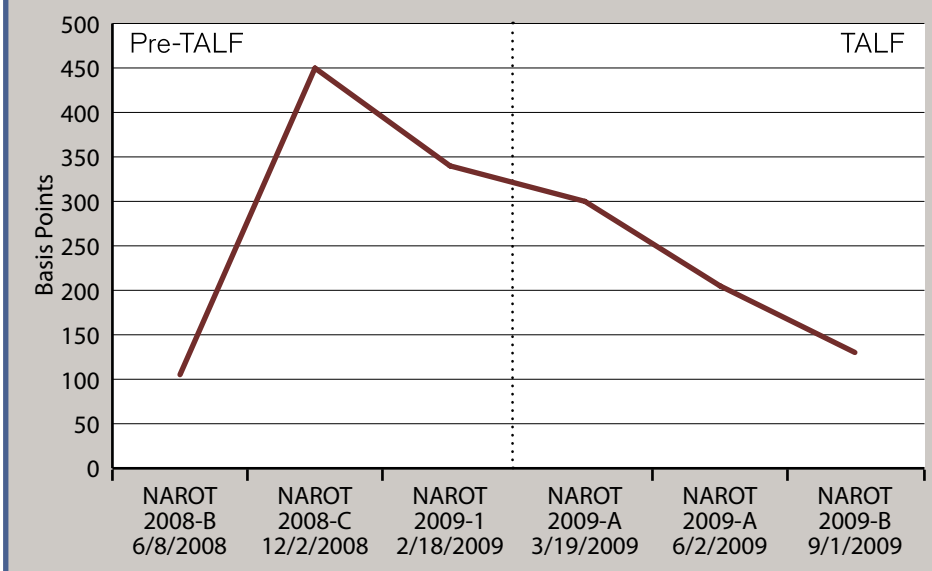
With spreads tightening and volatility declining, analysts say that traditional cash investors have re-entered the market. Auto finance companies that have issued multiple deals this year have seen funding costs fall with successive deals. Figure 5 illustrates the spreads on ABS backed by Nissan auto loans both before TALF was put into effect and after. The spreads reached 450 basis points before TALF was enacted and ultimately fell to 150 basis points by September of 2009. This indicates greater liquidity in the ABS markets and improved capital funding options for firms.

Inspection of ABS spreads for sectors that were not the focus of TALF operations suggests that TALF may also have played a beneficial role in the broader market. After the announcement of TALF's expansion to as much as $1 billion on February 10, 2009, spreads for the credit card, auto, and student loan sectors narrowed.

Issuance for the consumer ABS market has also increased across the credit card, auto loan, and student loan segments. Even before the first TALF operation, student loan ABS re-emerged in February 2009, the first issuance in the sector since August 2008. TALF loans in March and April 2009 supported the first credit card deals since October 2008, and more auto loan ABS were issued in those two months than in the previous four months combined.

As markets resumed more normal levels of issuance, new issuance was increasingly done without TALF support. TALF loans (settled) peaked in the June 2009 round of funding, with a decrease in loan requests through the rest of 2009. Overall issuance, particularly for both auto sector ABS and credit card ABS remained healthy, as originators were able to issue ABS without reliance on TALF support. In the second quarter

Figure 5: Spreads on recent Nissan auto deals



SOURCE: Bloomberg. **NOTE:** NAROT indicates Nissan Auto Receivables Trust; each entry indicates a particular series and date of issue.

of 2009, half of the ABS in these two sectors were supported by TALF; by the fourth quarter, the issuances supported by TALF had dwindled to a small number.

In addition, TALF has eased funding pressure by providing alternative funding for firms. After issuing TALF-eligible ABS, 80 percent of issuers were able to decrease their funding costs, with approximately half of issuers reducing costs by over 100 basis points and about one-quarter reducing costs by over 200 basis points. Importantly, the TALF program was conducted with minimal risk to the Federal Reserve and the Treasury. As of February 2010, the Treasury anticipated realizing a profit from the TALF program (U.S. Government Accountability Office, 2010).

A paper by Johnson, Pence, and Vine suggests that programs such as TALF that restored credit to the markets helped prevent the broader U.S. economy from sinking even further into distress. The authors found a strong link between financing conditions and the sale of vehicles when using both household level data and aggregate data. Specifically, they found that 38 percent of the decline in vehicle sales between the end of 2007 and the beginning of 2009 could be attributed to increases in the interest rates on new vehicle loans and households' perception that credit conditions were unfavorable. The purchases of households that were likely to face borrowing constraints were extremely sensitive to changes in credit conditions, but were not sensitive to expected changes in income. The study found that aggregate vehicle sales fell 130,000 units for every 1 standard deviation increase to the interest rate. This suggests that by making credit more accessible and affordable to consumers, TALF supported vehicle sales and the economy as a whole.

Conclusion

The ABS market augments the banking industry's balance sheet capacity and provides an important source of funding for market participants. Liquid and well-functioning ABS markets help to keep credit flowing freely between consumers, firms, and investors. The TALF program offered a liquidity backstop and leverage to investors in the ABS and CMBS markets. The resulting increase in market liquidity helped spreads in core ABS classes, such as credit card and prime auto, to fall back to levels similar to those seen before the Lehman bankruptcy. TALF was also instrumental in funding new issuance to return ABS markets to pre-crisis operations. As ABS markets have recovered, increasing amounts of ABS have been issued without TALF support.

ABS spreads for many sectors, including prime auto, equipment, and credit cards, are pricing below the TALF loan rate and have not been adversely affected by the conclusion of the TALF program. However, spreads for ABS backed by longer maturity and subprime assets, such as subprime credit card, private credit student loans, and floor plan, will likely widen following the end of TALF. This is because issuance in these asset classes is more reliant on TALF financing; and spreads may increase modestly to make the deals attractive enough to investors to replace levered TALF investors.

Notes

1 ABS data from JP Morgan include U.S. issuance for the following sectors: student loan, auto, credit card, equipment, floor plan, global RMBS (residential mortgage-backed securities), subprime/HELOC (home equity line of credit), manufactured housing, franchise, insurance, servicing advances, marine, stranded assets, RV (recreational vehicle), tax lien, tobacco, and time share.

2 Data from JP Morgan show that subprime/HELOC ABS issuance fell from $31 billion in June 2007 to $9 billion in July 2007. ABS issuance backed by autos and credit cards fell to zero in August 2008 and October 2008, respectively.

3 The material in this section draws on several press releases issued by the Board of Governors of the Federal Reserve System as cited in the references.

Rederences

Agarwal, S., C. Cun, and M. De Nardi, 2010, "Rescuing asset-backed securities markets," Chicago Fed Letter, Federal Reserve Bank of Chicago, No. 270, January.

Benmelech, E., and J. Dlugosz, 2010, "The credit rating crisis," in NBER *Macroeconomics Annual 2009*, D. Acemoglu, K. Rogoff, and M. Woodford (eds.), Chicago: University of Chicago Press, pp. 161–207.

_____, 2009, "The alchemy of CDO credit ratings," *Journal of Monetary Economics*, Vol. 56, No. 5, July, pp. 617–634.

Board of Governors of the Federal Reserve System, 2009a, "Federal Reserve adopts final rule establishing a process to determine the eligibility of credit rating agencies for the Term Asset-Backed Securities Loan Facility (TALF)," press release, December 4.

_____, 2009b, "Federal Reserve announces changes to procedures for evaluating asset-backed securities pledged to the Term Asset-Backed Securities Loan Facility (TALF)," press release, October 5.

_____, 2009c, "Federal Reserve and Treasury Department announce extension to Term Asset-Backed Securities Loan Facility (TALF)," press release, August 17.

_____, 2009d, "Federal Reserve announces that certain high-quality commercial mortgage-backed securities will become eligible collateral under the Term Asset-Backed Securities Loan Facility (TALF)," press release, May 19.

_____, 2009e, "Federal Reserve announces expansion of eligible collateral under Term Asset-Backed Securities Loan Facility (TALF)," press release, May 1.

_____, 2009f, "Federal Reserve announces two new interest rates applicable to loans extended under Term Asset-Backed Securities Loan Facility (TALF)," press release, April 21.

_____, 2009g, "Board announces that the set of eligible collateral for loans extended by the Term Asset-Backed Loan Facility (TALF) is being expanded to included four additional categories of asset-backed securities," press release, March 19.

_____, 2009h, "Treasury and Federal Reserve announce launch of Term Asset-Backed Securities Loan Facility (TALF)," press release, March 3.

_____, 2009i, "Federal Reserve is prepared to expand Term Asset-Backed Securities Loan Facility (TALF)," press release, February 10.

_____, 2009j, "Federal Reserve releases additional terms and conditions of the Term Asset-Backed Securities Loan Facility (TALF)," press release, February 6.

_____, 2008a, "Federal Reserve releases revised information detailing operational aspects of Term Asset-Backed Securities Loan Facility (TALF)," press release, December 19.

_____, 2008b, "Federal Reserve announces the creation of the Term Asset-Backed Securities Loan Facility (TALF)," press release, November 25.

Dudley, W., 2009, "A preliminary assessment of the TALF," speech delivered at the Securities Industry and Financial Markets Association and Pension Real Estate Association summit, Public–Private Investment Program, New York, June 4.

Ergungor, O., 2003, "Securitization," Economic Commentary, Federal Reserve Bank of Cleveland, August 15.

Federal Deposit Insurance Corporation, 2007, *Risk Management Credit Card Securitization Manual*, Washington, DC, March, available at www.fdic.gov/regulations/examinations/credit_card_securitization.

Fender, I., and J. Mitchell, 2009, "The future of securitization: How to align incentives," *BIS Quarterly Review*, Bank for International Settlements, September, pp. 27–43.

Fitch Ratings, 2006, "U.S. credit card ABS rating criteria and validation study," *Asset-Backed Criteria Report*, October 17.

Flanagan, C., A. Sze, B. Sigurdardottir, and A. Sheikh, 2009, "Investing in asset-backed securities," JPMorgan, report, March 31.

Gorton, G., and A. Metrick, 2009, "Haircuts," National Bureau of Economic Research, working paper, No. 15273, August.

Gorton, G., and N. Souleles, 2006, "Special purpose vehicles and securitization," in *The Risks of Financial Institutions*, R. Stulz and M. Carey (eds.), Chicago: University of Chicago Press, chapter 12.

Ip, G., J. Hagerty, and J. Karp, 2008, "Housing bust fuels blame game," *Wall Street Journal*, February 27, p. A1.

Johnson, K., K. Pence, and D. Vine, 2010, "New vehicle sales and credit supply shocks: What happened in 2008?," Federal Reserve Board of Governors, working paper.

Office of the Comptroller of the Currency, Administrator of National Banks, 1997, "Asset securitization," *Comptroller' s Handbook*, booklet, Washington, DC, November.

Robinson, K., 2009, "TALF: Jump-starting the securitization markets," *Economic Letter*, Federal Reserve Bank of Dallas, Vol. 4, No. 6, August.

Sabry, F., and C. Okongwu, 2009, "How did we get here? The story of the credit crisis," *Journal of Structured Finance*, Vol. 15, No. 1, Spring, pp. 53–70.

Sellon, G., and D. VanNahmen, 1988, "The securitization of housing finance," *Economic Review*, Federal Reserve Bank of Kansas City, Vol. 73, No. 7, July/August.

U.S. Government Accountability Office, 2010, "Troubled Asset Relief Program: Treasury needs to strengthen its decision-making process on the Term Asset-Backed Securities Loan Facility," press release, February 5, accessed at www.gao.gov/product/GAO-10-25.

Biographies

Sumit Agarwal is a senior financial economist in the Economic Research Department at the Federal Reserve Bank of Chicago. His research interests include issues relating to household finance, financial institutions, and consumer behavior. His research has been published in the *Journal of Political Economy, Journal of Financial Economics, Review of Financial Studies* and many other journals. Additionally, he has co-edited a collected volume on *Household Credit Usage: Personal Debt and Mortgages*. Agarwal received a PhD from the University of Wisconsin–Milwaukee.

Jacqueline Barrett is an associate economist in the Economic Research department at the Federal Reserve Bank of Chicago. As a member of the financial markets and banking group, she has primarily been involved in research relating to household finance. She received her BA from Northwestern University.

Mariacristina De Nardi is a senior economist and research advisor in the Economic Research Department at the Federal Reserve Bank of Chicago. She is also a faculty research fellow of the National Bureau of Economic Research. Her research focuses on savings, wealth inequality, social security, entrepreneurship and taxation. De Nardi's research has been published in *The Review of Economic Studies*, the *Review of Economic Dynamics*, the *Oxford Review of Economic Policy*, the *Journal of Political Economy* and the *American Economic Review*. De Nardi received a BA from the University of Venice in Italy, and a PhD in economics from the University of Chicago.

Chicago Fed's Community Development and Policy Studies department 2010 year in review — *highlights*

The last year of the first decade of the century was a very busy year and the dawn of a new era for the department of Community Development and Policy Studies (CDPS). The department began the year as Consumer and Community Affairs, but effective August 1, reorganized into newly named and staffed work units. Alicia Williams remains the vice president and head of the overall department, which now comprises Community Development, headed by Harry Ford, Economic Development, headed by Jeremiah Boyle, and Policy Studies, headed by Michael Berry. The Production unit is headed by Mary Jo Cannistra.

Much work and attention in CDPS continued to focus on fallout from the financial crisis, and on mortgage foreclosures and their effects in particular. The Regional Home Ownership Preservation Initiative (RHOPI) generated some important results stemming from recommendations issued in 2009 by the partnership. RHOPI was built on the Chicago focused Neighborhood Housing Services' Home Ownership Preservation Initiative (HOPI) program, but expanded the geographic focus to hard hit suburbs. A critical success of RHOPI was cross-jurisdictional cooperation that resulted in Neighborhood Stabilization Program (NSP) moneys allocated to clusters of western and southern Cook County suburbs for property reclamation and redevelopment, following a great deal of groundwork (and ongoing operational work) by the Metropolitan Planning Council, Metropolitan Mayors Caucus, the Chicago Metropolitan Association for Planning, Chicago Metropolis 2020, and others. The Woodstock Institute launched in 2009 and administers the RHOPI Web site, which serves as an information repository for regional developments. Woodstock also issued several informative reports on the situation in the Chicago MSA and recommendations for policymakers, lenders/servicers, and community development practitioners toward remediation. A well-attended July forum brought the partners back to the Chicago Fed for updates and policy discussion.

The Chicago Fed led a Federal Reserve System Conference of Presidents initiative called "Mortgage Outreach and Research Efforts" – MORE. This project was chaired by Chicago Fed President and CEO Charlie Evans, with overall operations coordinated by Chicago Fed vice presidents Alicia Williams and Doug Evanoff. MORE's purpose was to gather information on local, regional, and national housing finance conditions, useful and innovative intervention programs around the country to address the damaging effects of foreclosures on communities, and to catalog key related research. The MORE Report was released in December and documents important developments, research, foreclosure mitigation efforts and training programs, (early) impacts of the Neighborhood Stabilization Program, among other key resources.

CDPS held a myriad of conferences, meetings, and events on varying community and economic development topics. Among the most important was the series of meetings on addressing small business finance, part of a Fed System initiative to explore and address impediments to credit channels for small businesses, a critical component to rebuilding local economies and reducing unemployment. The December 2010

issue of PNV features an article capturing the key findings from the meetings that took place in the Seventh District, and the full text of Fed Chairman Ben Bernanke's keynote address at the June 3, 2010, meeting.

PNV continues to expand its readership with roughly a 4 percent increase in subscribers over the calendar year. PNV is the primary medium for CDPS articles and research, and in 2010 we covered areas including credit card usage across demographic profiles (April edition), and case studies of cities that successfully applied for Neighborhood Stabilization Program funds (November); a variety of conference summaries covering key presentations and ideas, as well as summaries of academic research, appear regularly in PNV. The September edition provided a summary of research on default rates of prime versus subprime mortgages by Fed economists Anna Paulson and Gene Amromin. Defaults among prime borrowers, they reveal, increased sharply with decreases in home values. Lenders and housing counselors with whom CDPS staff interact regularly – though not part of this research effort – further attribute many prime defaults to the loss of jobs during the economic recession.

CDPS organizes the Agriculture, Small Business, and Labor Advisory Council, which meets semi-annually in April and October. The council comprises leaders in entrepreneurial and private businesses, individuals involved in aspects of agriculture and representing local/regional agricultural economies in the Seventh District, as well as labor leaders. The council provides input to the Reserve Bank's regional economic team and senior management, which in turn informs economic and monetary policy recommendations emanating from the Chicago Fed.

Finally, CDPS organized and hosted two important public meetings in 2010. In August, CDPS hosted an interagency public hearing to collect public comments on (potential) updates and modernization measures to the Community Reinvestment Act. In September, the Chicago Fed organized with the Board of Governors a hearing on the Home Mortgage Disclosure Act, to determine whether the Act is working as intended, or if changes to collecting and reporting data could improve its effectiveness.

Looking ahead, our work in 2011 includes a close look at access to credit for small businesses in Detroit, and responses to the impacts of globalization in industrial cities throughout the Seventh District.

Calendar of Events

Americas Center Consumer Banking Conference: Strengthening the Financial Safety Net in Emerging Markets

Miami, FL
May 4, 2011

The Atlanta Fed's Americas Center will host the conference, "Strengthening the Financial Safety Net in Emerging Markets." Speakers will discuss topics related to building financial capacity in communities to help them become more resilient in the face of financial downturns, natural disasters, and economic disinvestment. For more information, visit www.frbatlanta.org/news/conferences/11consumer_banking.cfm.

Exploring Innovation: A Conference on Community Development Finance

St. Louis, MO
May 9-11, 2011

The Federal Reserve Bank of St. Louis invites lenders, investors, nonprofit community development practitioners and others to learn how to use innovative business models that will address the financing of all aspects of thriving communities—from housing and infrastructure to community engagement and leadership development. Learning tracks will include retail products and services, the green economy, investments and equity, and financing comprehensive development. For more information, visit www.stlouisfed.org/community_development/events/?id=256.

2011 Federal Reserve Bank of Cleveland Policy Summit

Cleveland, OH
June 9-10, 2011

The Federal Reserve Bank of Cleveland Community Development and Research divisions, welcome paper submissions for its 2011 annual policy summit. Researchers, practitioners, policymakers, funders, elected and legislative officials, and bankers from across the Great Lakes region are invited to address housing, inequality, neighborhoods, and labor market issues, with special consideration given to research related to the foreclosure crisis. Topics of particular interest include labor mobility and housing lock-in, wealth and income inequality, housing and human capital formation, labor and housing issues in industrial cities, neighborhood effects, and neighborhood formation. Policy-related research and submissions related to housing and labor markets in the Federal Reserve's Fourth District and the Great Lakes region are encouraged.

Questions about the policy summit can be directed to Tim Dunne (tim.dunne@clev.frb.org) or Francisca G. Richter (francisca.g.richter@clev.frb.org). Visit www.clevelandfed.org/2011policysummit/call.cfm.

This issue of *Profitwise News & Views* is printed on 100% PCW

PLEASE RECYCLE AFTER READING

Profitwise

News and Views

Published by Community Development and Policy Studies

Subscription is FREE. To subscribe or view current and past editions, please visit the Web site of the Federal Reserve Bank of Chicago at: *www.chicagofed.org/profitwise* or fill out this form and send it back to us, and we will add you to our mail list.

Name: _____

Company: _____

Address: _____

Phone: _____

E-mail: _____

Address Change ☐

Please check your subscription preferences:

Print only ☐ E-mail only ☐

Print & E-mail ☐

Subscribe!

Visit the Web site of the Federal Reserve Bank of Chicago at: *www.chicagofed.org*

NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 24422 CHICAGO, IL

POSTAGE WILL BE PAID BY ADDRESSEE

ATTN: PNV - CDPS 12TH FLOOR
FEDERAL RESERVE BANK OF CHICAGO
PO BOX 834
CHICAGO IL 60690-9975

FEDERAL RESERVE BANK
OF CHICAGO

**Community Development and
Policy Studies Division**

**P.O. BOX 834
CHICAGO, IL 60690-0834**

RETURN SERVICE REQUESTED

Attention:
Executive Officers
Board of Directors
CRA Officers
Community Lenders
Community Representatives

Profitwise News and Views is published by the
Community Development and Policy Studies
Division of the Federal Reserve Bank of Chicago
230 S. LaSalle Street
Chicago, IL 60604-1413