



## Could Tremors in the Subprime Mortgage Market Be the First Signs of an Earthquake?

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For months, the steady drip of news about troubles in the subprime mortgage market looked no worse than one would expect: merely a comeuppance for lenders, borrowers and investors who should have known that high-interest loans to people with poor credit were risky.

During the same period, many economists started breathing again after concluding that the superheated home market of recent years had not become the bursting bubble many had feared. While home prices are leveling off, there has been no deep, widespread decline.

But now some experts wonder whether those sighs of relief came too soon, especially in light of the troubles recently experienced by one of the largest subprime players, HSBC Holdings. Some suggest that the growing number of borrower defaults in the "aggressive lending" market, which includes various types of risky mortgages besides subprime loans, could shock the broader housing market and economy after all. Many subprime borrowers are paying 10% to 12%, compared to 6% to 8% on standard, or "prime," loans, and delinquencies are rising.

"There's no doubt that we have already lost about 1 percentage point of [economic] growth due to the pullback in the housing market," says Wharton real estate professor [Susan M. Wachter](#). A retrenchment after years of soaring home prices fueled by easy money has caused many economists to trim this year's growth forecasts from 4% to 3%, she adds.

And it could get worse, she warns. If interest rates rise, growing numbers of homeowners could fall behind on aggressive floating-rate loans they took out in recent years, forcing their homes onto the market. The glut would depress prices of homes bought with ordinary "prime" loans as well. With home values flat or falling, owners would no longer be able to use refinancing to convert equity into cash, trimming consumer spending. The current slump in home building and sales would persist. "We could potentially have a housing-led recession," Wachter says. If this does occur, it could begin in the second half of 2007 or sometime in 2008, if interest rates rise.

Others think the U.S. economy could well dodge this bullet. "I'm sort of an optimistic pessimist," says Jack M. Guttentag, emeritus finance professor at Wharton. He expects home prices to fluctuate aimlessly for two to three years without a major decline. But the future is uncertain, he adds, because many of the newer, risky loans have track records only through the recent period of rising home prices. "Rising home prices are an offset to all kinds of trouble," he notes. "They tend to reduce defaults and foreclosures that otherwise would occur, because people who get into trouble find that the best thing they can do is sell their house and walk away with some equity."

### Incomplete Risk Data

In a mid-February report titled, "Will the Subprime Meltdown Trigger a Credit Crunch?" Morgan Stanley analyst Richard Berner concludes it will not, describing a credit crunch as a condition in which "lenders deny even creditworthy borrowers access to borrowing." Many firms specializing in subprime loans -- offered to borrowers with credit scores below 620 -- will go under, he says, but prime lenders' balance sheets are strong and he expects them to continue making loans and keeping the economy healthy. (Credit



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scores range from 300 to 850, with scores above 700 generally considered good and those below 600 counted as very high risk.)

While there is debate over how matters will unfold, there is little doubt that changes in mortgage lending have created risks that cannot be gauged precisely. Wachter notes that the heavy use of aggressive loans is so new that data on which lenders and investors base their risk models is incomplete. "There is the potential for model error. The models are untested in a down market."

The classic U.S. mortgage charged a "fixed" interest rate that stayed the same for the loan's 30-year life. Once the mortgage papers were signed, the homeowner's monthly payments never changed, making payments easier and easier to shoulder as the borrower's income rose with inflation. Generally, home values went up as well, so the borrower could expect to sell at virtually any time for more than he owed.

But the picture has dramatically changed in recent years. Wachter estimates that nearly two-thirds of all home loans issued since 2003 were types she terms "aggressive." These entail risks for the lenders, borrowers and investors in mortgage-backed securities that are not found in conventional loans. In addition to subprime loans, this includes interest-only loans where the borrower makes no principal payments. It includes negative-amortization loans in which the borrower pays less than the full interest payment, with the shortfall added to the outstanding debt. And it includes loans that require little or no down payment, or no proof of income.

Subprime lending, the riskiest category of aggressive loans, soared from \$150 billion in 2000 to \$650 billion in 2005, according to testimony at a recent Senate hearing on predatory lending.

Several factors were responsible. One was the Community Reinvestment Act of 1977, which made redlining illegal and pushed lenders to make loans in poorer communities they previously had avoided, says Kenneth Thomas, adjunct professor at Wharton. In the 1990s, Congress and the Clinton administration pushed policies to encourage wider home ownership, which today is at the highest level in U.S. history, nearly 69% of households.

"A regulatory climate developed -- which still exists today -- that favored these loans," he says. There is a distinction, he notes, between subprime loans for people who deserve mortgages and otherwise could not get them, and predatory lending, which is pushing people into loans they cannot afford. "Subprime is good, predatory is bad."

Another factor was work by academics and lenders who found that people with low credit scores were not as risky as previously thought. In the 1980s and 1990s, lenders "began to learn how to trade off one risk factor against another risk factor," Guttentag says. "A bunch of guys realized there was a lot of money to be made for delivering loans to a category of buyers who had never qualified for loans. They found that they could charge very high rates to cover their risk and make large profits."

According to Wachter, her research showed that many people deemed not creditworthy actually were paying more in rent than they would if they could get mortgages. For many renters, the obstacle to home ownership was not the size of the monthly payment, but the need for a down payment of 10% to 20% of a home's cost. In the 1990s, lenders began addressing the problem with low- and no-down payment loans, and with computerized loan approvals that used a more scientific approach to judging applicants' credit worthiness, she says.

The final factor was the mushrooming in the 1990s of "securitization," the bundling of home loans into bond-like securities that could be bought and sold on the secondary market. This allows lenders to get loans off their books so they can lend more.

Fannie Mae and Freddie Mac, the quasi-governmental lenders, had long sold mortgage-backed securities, but these companies were restricted to making prime loans. Once other lenders realized money could be made from subprime borrowers, they began bundling these loans into securities. "What happened in the middle 1990s was the development of private-label mortgage-backed securities, as opposed to these quasi-public enterprises which had implicit government backing," Wachter says.

In 2003, Fannie and Freddie purchased and repackaged about 70% of loans that wound up on the secondary market. By the end of 2006, that figure had fallen to 40%, reflecting other lenders moving into

this business.

Although these securities carry higher risks, they are popular with hedge funds and other investors because subprime borrowers pay higher interest rates than prime borrowers -- often 3, 4, or 5 percentage points more. That has made subprime securities especially attractive in recent years, as rates on many fixed-income holdings have languished in the low and mid single digits.

To get mortgage brokers to push these profitable loans, lenders typically offer commissions equal to about 3% of the loan, compared to 1% for a prime loan, Guttentag says. "A lot of brokers just specialize in subprime loans."

## 17 Rate Hikes

Several studies have shown that subprime loans have been pushed very hard in poorer communities, often to borrowers who could qualify for prime loans with better terms.

The subprime lending industry was doing fine until the Federal Reserve started its string of 17 hikes in the short-term interest rate in the summer of 2005, taking the rate from 1% to 5.25%. Four out of five subprime loans carry floating interest rates that, after the first year or two, change every 12 months as short-term interest rates fluctuate. Because of the Fed hikes, homeowners who received these loans in 2005 are now finding their monthly payments rising by 30% to 50%, leading many to fall behind in payments. "None of this would be an issue now if we did not have 17 straight increases in rates," Thomas says.

About 70% of subprime loans have prepayment penalties that can make it too expensive for homeowners to refinance to conventional fixed-rate loans with lower interest rates. Because home prices are flat or falling in many of the poorer neighborhoods where subprime loans are most common, even those owners who can handle the prepayment penalties may find it impossible to get new loans large enough to cover their balances on the old ones.

The result: increasing numbers of defaults and delinquencies. At the end of 2003, about 7% of subprime loans were in foreclosure or serious delinquency -- with payments at least 90 days overdue, according to Morgan Stanley's Berner. By late 2006, the figure had soared to 12.6%. For all mortgages, the figure is 1.4%. Although the Fed stopped raising rates last August, Wachter notes that much of the damage is yet to come, since many adjustable loans still haven't had their first rate adjustment.

The Mortgage Bankers Association says between \$1.1 trillion and \$1.5 trillion in floating-rate mortgages will adjust in 2007, but expects about half to be refinanced so that the borrowers will not face payment increases. About six percent of all homeowners have subprime loans with adjustable rates. "I think we are still on the downside of the curve," Thomas says. "Things will get worse before they get better."

Aggressive lending allowed people to buy homes who otherwise could not have, and that increase in demand is part of the reason home prices soared in the first half of the decade. In a December 2006 paper, "Aggressive Lending and Real Estate Markets," Wachter and co-author Andrey Pavlov of Simon Fraser University concluded that neighborhoods and cities that had high concentrations of aggressive lending suffered the largest home-price declines after the market cooled.

They focused on neighborhoods in which disproportionate shares of loans were ARMs -- adjustable-rate mortgages. "For each one-percent higher share of ARMs in 1990, the price decline increases by 1.3% for that neighborhood," they write. This is an ominous finding for inner-city neighborhoods where aggressive loans are prevalent. Broader markets at greatest risk are in Florida, Arizona, the District of Columbia, Nevada, California, Illinois and Utah, Wachter and Pavlov say.

But will problems in areas like these send ripples through the national economy? Although Wachter worries that it could, Thomas does not think so. He notes that banks and other lenders that do not specialize in subprime loans appear quite healthy. "I don't see this Doomsday scenario at all, the reason being that the financial markets are so strong," he says, adding that the wildest excesses have already been curbed as lenders, under pressure from state and federal regulators, have tightened credit standards and demanded larger down payments and proof of income, he states.

Hundreds of billions of dollars worth of securities based on aggressive loans have been sold on the secondary market, and some investors are sure to suffer if homeowners default. The seriousness of this has been made clear by recent stories about investors pressuring lenders to buy these securities back.

Most experts believe securitization generally works to reduce risk in the marketplace, because easy trading of these securities allows lenders to pass risk to investors who feel able to shoulder it. It is widely believed that hedge funds are among the major investors in securities based on subprime and other aggressive loans, but no one knows for sure.

Securitization, says Guttentag, "does diversify the risk," but, he adds, "We don't have any good data on who exactly holds those securities."

One of the largest subprime players, HSBC Holdings, announced early in February that bad debts had exceeded a staggering \$10.5 billion in 2006, sending shivers through the industry. "What other cases are out there like that?" Wachter asks. "We don't know."

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