Subprime Crisis: Could New Rules Avert Another Credit Crisis? Perhaps, but Be Wary

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Could new rules prevent a recurrence of the credit meltdown?

A raft of regulatory changes is under consideration in various federal agencies and the Congress. They include closing regulatory gaps, requiring investment banks to keep more cash on hand, standardizing mortgage securities so their values are easier to set, and forcing the firms that create them to share losses when the securities they sell to others go bad.

But experts at Wharton and beyond warn that the search for long-term solutions requires a clear picture of what went wrong, and as the pace of ugly surprises slows, that is coming into focus.

The crisis was triggered by the rare simultaneous alignment of three conditions: interest rates rose, home prices fell and Americans' incomes stayed flat. Yet none of these elements was surprising in itself. Interest rates merely returned to normal in 2006 after dipping to extraordinary lows in 2003. Home prices stopped climbing after years of double-digit gains that clearly could not continue forever -- not when homeowners' incomes were flat.

"It was simply a return to more normal sorts of economic relationships," says Wharton finance professor Ri Richard J. Herring. That a return to normal could cause such a catastrophe underscores the vast changes that had taken place in the mortgage-lending industry in recent years, piling risk upon risk.

In previous decades, most mortgages were backed by the Federal Housing Administration and government-authorized companies Fannie Mae and Freddie Mac, which bought mortgages and bundled them into high-grade securities that were then sold to investors in the form of bonds. Investors shared rights to homeowners' principal and interest payments.

But from 2002 through 2006 the market changed, says Wharton real estate professor Susan M. Wachter. A growing portion of mortgages were issued by firms not backed by Fannie, Freddie and the FHA -- and not bound by the same legal requirements to deal only in investment-grade loans and securities. Wall Street had taken over the role of packaging the mortgages into marketable securities.

"This was private-label securitization, which did not exist 15 or 20 years ago," Wachter says. The new system relied on automated underwriting techniques developed by Freddie in the mid-1990s. Essentially, that was a computerized method of determining if a loan applicant was an acceptable risk based on how similar applicants and loans had performed in the past.

Lending Standards Matter

Fannie, Freddie and the FHA have long operated under federal underwriting standards that minimized risk by making sure borrowers could afford to make monthly payments, and by requiring down payments of as much as 20%. Homeowners who have money tied up in their homes are less likely to default, or

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stop making payments, if they get into financial trouble. And the down payment assures the homeowner -- or the lender in a foreclosure -- can sell the home for enough to pay off the loan.

But the new lenders did not have legally mandated underwriting standards and they entered a race to offer ever more attractive terms to borrowers. "You compete for market share by competing with your fellow lenders, by undercutting them," Wachter says. "And you can undercut them on [interest] rates; you can undercut them on standards."

Lenders offered subprime loans to people who could not qualify for ordinary prime loans because of poor credit or inadequate income. To help them qualify, lenders offered low teaser rates -- sometimes only 3 or 4% -- to produce a low monthly payment.

After the first one, two or three years, the monthly payments would be recalculated by adding a set number of percentage points -- sometimes five or more -- to an underlying measure of prevailing rates. If prevailing rates went up, the rate charged on the loan might jump over the years from 4% to 8%, perhaps even higher. Monthly payments could more than double.

Underwriting standards hit bottom in 2006, Wachter says. Many lenders required no down payment at all, no longer demanded proof of an applicant's income and offered very low teaser rates. Some "option" loans allowed borrowers to essentially pay whatever they wanted to each month, with shortages added to the principal, or remaining debt. This process, called "negative amortization," can leave the borrower owing more and more as time goes by. In a standard mortgage, the debt gradually shrinks.

The flood of easy money gave borrowers more to spend, allowing them to bid up home prices, causing many of them to resort to loans with low teaser rates or requiring no income documentation to qualify.

In 2004, home prices rose by more than 20% in much of the country, and by more than 25% in California, Florida and some other hot markets. In 2005, about 22% of new home mortgages were subprime, up from 8% in 2003. Home prices peaked in the second quarter of 2006.

About two-thirds of the home-price run-up during the decade was caused by low interest rates, notes Todd Sinai, real estate professor at Wharton. "A third of it just seems to be what we call momentum -- looking backward and saying, 'Hey, prices have gone up, they're going to go up in the future,' " he says.

In other words, it was a bubble.

The dramatic decline in lending standards, especially in 2006, caused home prices to rise to unsustainable levels, Wachter says. It's the 2006 book of business that is under most stress," she notes. "That is where the foreclosures are coming from as of now."

Although the growing risks were clear to people who understood the mortgage and housing markets, lenders kept lending because they could earn big up-front fees. They were not terribly concerned if homeowners defaulted later, Wachter says, because the loans were converted into securities that passed the risks on to investors.

Pursuing Percentage Points

All of this was abetted by investors' growing appetite for mortgage-backed securities, which offered higher yields than safe investments like U.S. Treasuries. The Federal Reserve had been helping the economy recover from the dot-com collapse by driving rates down, with the fed funds rate falling to a mere 1% in June 2003.

"In the extremely low interest rate environment of 2002, 2003 and 2004, people got very hungry for yields," says Wharton finance professor Jeremy Siegel. "They were saying, 'Oh, I don't want to accept 1% or 2%, I want to get it a little bit higher.' They were saying, 'Oh, here's a security collateralized against real estate, against a home. That *never* declines in value.'"

"So there was a machine being developed which created just a fantastic amount of this [mortgaged-backed] junk, and it was being repackaged as high-quality [securities]," says Wharton finance professor Marshall E. Blume. "At some point, that all had to explode. ... It was like a Ponzi scheme."

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The Wall Street firms creating mortgage securities faced a problem, Herring says: many of the big institutional investors who had enough money to soak up these securities were restricted by laws or internal rules to investment-grade issues, and the subprime loans were too risky for AAA ratings.

"There was a much bigger demand for investment-grade securities than there are investment-grade issuers in the world," he says. "So the financial engineers began to innovate to find ways to synthesize investment-grade securities by making combinations of these underlying mortgage pools and other sorts of securities."

While a bundle of mortgages might be rated below AAA as a whole, the risks could be concentrated into low-grade slices, or "tranches," that would be the first to lose money if any homeowners in the bundle stopped making payments. The rest of the bundle would have first rights to borrowers' payments, reducing risk and thus earning AAA ratings. With additional steps such as mixing in other types of securities, some of the riskier tranches could be upgraded as well. The process was like tidying a house by sweeping the clutter into one room.

"This was an extremely popular innovation. It led to a profusion of perhaps $6 trillion or more in securitizations, many of these mortgage-backed, and it began to become more and more complex," Herring says.

Ratings agencies such as Standard & Poor's, Moody's and Fitch helped move the process along. The ratings agencies' role "was something less than being consultants on how to do it, but it had the same effect," Herring says, "because a potential issuer would essentially show a securitization to a ratings agency and ask, 'What kind of rating do I get with this?' If they didn't like the answer they would go back and try another [design]."

It seemed like an elegant, market-based solution that served everyone. People got mortgages. Mortgage originators and Wall Street firms earned high fees. Investors got top-rated securities. Builders sold more homes and home prices soared.

Then, in 2007, it came apart. Growing numbers of homeowners facing their first rate resets found their monthly payments jumping by 25% or 50%, sometimes more. Since incomes were only inching up, many found they could not afford the higher payments. Lenders started to tighten up on underwriting standards, making less mortgage money available.

Cut off from the rocket fuel of easy money, fewer people were in the market for homes, and as demand slackened home prices began to fall at record rates, by around 13% in the 12 months through the end of February 2008. People saddled with mortgage payments that were now too high could not sell their homes for enough to cover their remaining debt.

While many subprime borrowers had expected to refinance to less-expensive fixed-rate mortgages after their payments went up, they now could not because their homes were not valuable enough to serve as collateral on new loans.

Foreclosures rose from less than 200,000 in the third quarter of 2006 to more than 600,000 in the first quarter of 2008. By the fourth quarter of 2007, more and more homeowners were falling behind in payments, as delinquency rates rose to 5.8%, the highest since 1985. Subprime loans accounted for 42% of all foreclosures started that quarter. Rising default and foreclosure rates drove down the prices of mortgage-backed securities, since investors worried they would not get the principal and interest payments they had been promised.

"What was shocking was that so many of the financial institutions kept on creating [risky mortgage securities] even after they had trouble selling [them]," Siegel says. "A lot of institutions from Citigroup on down deserve the knock that they've had because they should have known better."

Tinder on the Forest Floor

The enormous growth in debt securities, coupled with the cavalier assessment of risk, was like tinder building up on a forest floor. "We needed a spark to set the fire, and the spark happened to be in the

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subprime loans," says Wharton finance professor Richard Marston. "If it hadn't been there, it would have been in some other security. Once you see the fire start, everyone starts to realize it's going to spread to other types of securities that have nothing to do with mortgages."

Wachter says the ratings agencies and securities firms that had produced securities backed by subprime loans had not factored in the potential effects of a nationwide depression in housing prices, which hadn't occurred in decades. "This is the first time in U.S. history since the Great Depression that we have had a national decline in home prices," she says. "So this is exceptional."

The computer models that were supposed to gauge risk and help reduce it also failed, Herring says. "There simply wasn't enough data over enough cycles to predict" how new types of securities would behave.

The computer models also had assumed that diversification -- collecting many mortgages in a pool -- would offset many of the default risks, just as owning a broad basket of stocks minimizes the damage when a few tumble. But the models had not taken into account the eroding underwriting standards, he says. There were just too many subprime borrowers in the pool. "It turned out that underwriting standards had deteriorated across the board almost all over the United States," he says.

Investors discovered they'd been wrong to assume a AAA-rated mortgage security was as safe as AAA-rated corporate bonds. "The ratings have shown themselves to be completely unreliable in this whole category of structured finance," Herring says. They'd ignored the warning sign: that the extra yield on AAA-rated mortgage securities signified higher risks. "That should have told them something, but they still bought them," says Blume.

Finally, investors worried that the safety net, monoline insurance to guarantee against losses on mortgage securities, would fail as losses become too big for insurers to handle.

To compound the problem for Wall Street, it turned out that many firms that had created the securities had not passed all the risks on to investors, Herring says. Some securities stayed on the firms' books. Others had been put into special purpose vehicles, legally separate subsidiaries set up by the Wall Street firms to attract investors' dollars while removing assets and liabilities from the firms' books.

Though these firms were not legally obligated to make good on losses in the SPVs, many felt they had to help out to maintain relationships with customers. Thus, the firms started reporting multi-billion dollar losses on risks their own shareholders had not known they'd taken.

Trust Dissolves

Big financial firms became wary of doing business with one another for fear that the other parties, if hit with unexpected losses, would not make good on deals. No one had a map of the minefield, and the markets were locked in a credit crunch -- a universal unwillingness to lend.

In the aftermath, economists, regulators and politicians have looked for remedies to both the immediate problems, such as the rising foreclosure rate, and underlying issues such as the way securities are created, rated and traded.

Most agree that any help for homeowners should be limited to primary homes and not include vacation homes or investment properties.

On May 8 the House of Representatives passed a Democratic measure that would allow an estimated half a million homeowners to refinance under better terms. It would let the Federal Housing Administration take on up to $300 billion in new fixed-rate mortgages. Where a home is no longer worth as much as the original loan, the new mortgage would be issued if the previous lender agrees to accept the lower amount as full payment. The lender would thus take a loss, but would avoid the potentially larger loss if the property went through foreclosure. To make sure homeowners aren't getting a free ride, they would have to share half of any future home-price gains with the FHA.

A companion measure would provide the states $15 billion to buy and fix up foreclosed properties, but remains mired in debate.

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Both bills initially faced heavy opposition from President Bush and many other Republicans, who worry they would encourage more unwise lending and borrowing, but there are signs Democrats and Republicans may compromise. Still, such measures can cause problems, says Blume. "Whenever people say they are going to bail out the homeowners, they are [also] bailing out the lenders, and that creates a horrible precedent," he says.

Wachter notes, however, that foreclosures are dumping homes onto the market in huge numbers at fire-sale prices, driving down values for neighbors who are merely innocent bystanders and threatening to throw the economy into a deep recession. She estimates that lenders who participated in the House program would lose 20% to 30% of their original loan amount, enough to discourage a resumption of loose lending habits. Investors in mortgage securities would suffer losses as well. "There's something to be says for that kind of response, where the lenders take a haircut and the investors take a haircut," she says.

Still, any help for homeowners is open to charges of unfairness, since nothing is done to help people who did not make bad decisions, says Sinai. "As a society, you might still want to do that," he says, noting the damage neighborhoods could suffer as homes are abandoned. "But it *is* inequitable, and you need to weigh that in."

Looking forward, some argue that subprime loans or adjustable-rate loans in general should be reined in. But that issue may be moot, says Siegel. "Right now, no one is writing subprime [loans]," Siegel says. "You don't have to have regulation against a 110% no-doc [no documentation] loan because no one is giving [them] and no one will for many, many years to come."

Sinai adds that there's nothing wrong with subprime loans in general, or with loans carrying adjustable-rates. The problem, he says, is negative-amortization, no-documentation and zero-down loans. Even those may be appropriate for some borrowers, so long as they understand potential problems like higher payments in the future, he says. "We need to regulate and mandate complete disclosure and understanding," he says. "But if you have a borrower who wants a different set of mortgage terms and investors who are willing to take on that risk, then there is no reason we shouldn't allow that financial product to exist."

While the marketplace has already corrected -- and punished -- many excesses, some problems still need to be addressed, according to Herring and Wachter. "There are going to have to be major changes in the way securitization works," Wachter says.

Standardizing Securities

Many of the newer types of mortgage securities were highly customized and difficult to trade, so computer models were used to determine prices. That turned out to be a poor substitute for supply and demand, Wachter says. She believes mortgage securities need to be standardized to encourage lively trading that would set prices more accurately. Mortgage securities would thus be something like the standardized contracts for corn, oil and other commodities that trade on futures exchanges. "Without standardization, there is no trading," she says.

Whether standardization can be accomplished with market-based incentives or would require new regulation is unclear at the moment, she says, noting that the Securities and Exchange Commission is looking at the question.

In another area, some experts say the ratings agencies need reform. Red-faced after their AAA-rated securities collapsed, they are working to improve their process. But some experts suggest ratings should be paid for by the buyers of rated securities rather than the sellers. *The Financial Times* reported on June 4 that the ratings agencies agreed to change their fee structures. The details of the changes would be announced later in the month, the newspaper reported, citing unnamed people who were familiar with the deal. In the meantime, the European Union's internal markets commissioner said on June 17 that the agencies may face tougher regulation in the EU.

Many experts argue that the subprime crisis shows that the system of regulating securities markets, pieced together since the 1930s, is behind the times. "What is happening is that the regulatory framework has not caught up," Blume says. The Federal Reserve, for example, has powers to oversee comm

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commercial banksbut little say over the investment banks, which it has recently bailed out with heavy loans under appealing terms.

"Clearly, many of us believe that the less regulation, the better," Marston says. "But once you have the Federal Reserve potentially committing taxpayers' money, you then have to say, 'Does the Federal Reserve have to play more of a role in regulation?'" His answer: The Fed should impose tougher requirements for investment banks to have enough capital to weather a storm.

"Another issue that has surfaced -- that we thought we had put to bed with Enron -- is the use of special-purpose vehicles or off-balance-sheet entities," Herring says. Though SPVs are meant to remove risk from the parent companies, it did not turn out that way. "Reputation risk caused most of the sponsors particularly the large bank sponsors, to bail them out," he says. "Yet neither the regulators nor the shareholders in general even knew [the SPVs] existed. So, we in fact have created an off-balance-sheet banking system that is huge, very nearly as large as the on-balance-sheet banking system."

In general, the way to deal with this would be to require the sponsoring companies to maintain investments in the securities they put into the special-purpose vehicles, giving sponsors more incentive to minimize risk, Herring says. Regulators are also considering revising accounting rules for SPVs.

The compensation system on Wall Street has also come in for criticism for emphasizing short-term results over long-term ones. In research with her colleague Andrey Pavlov, Wachter found that that the banking crisis that has undermined the Japanese economy over the past 20 years was largely driven by excessive focus on fee-making in the short-term. The same problem seems to have occurred in the subprime crises, she says.

But Marston is not optimistic about getting Wall Street to change its short-term outlook, even though billions have been lost and some top executives were shown the door. "You have to remember that the people who have learned this lesson will no longer be in leadership positions five or 10 years from now," he says. "We'll have a new group of people -- there's a lot of turnover in the financial services industry."

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