

# New mortgage design would minimize home foreclosures

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With mortgage loan defaults on the rise yet again, two mortgage researchers are proposing a new type of mortgage contract that automatically resets the balance and the monthly payment based on the mortgaged home's market value.

Brent Ambrose, Smeal Professor of Real Estate and director of the Institute for Real Estate Studies at the Penn State Smeal College of Business, and Richard Buttimer, a professor in the Belk College of Business at the University of North Carolina at Charlotte, call their new mortgage contract the "adjustable balance mortgage" and contend that it reduces the economic incentive to default while costing about the same as a typical fixed-rate mortgage. Under real-world conditions, including the presence of unrecoverable default transaction costs to the lender, this new mortgage contract is better for both lenders and borrowers.

"The threat of foreclosure is not sufficient to prevent widespread default when house prices fall significantly," Ambrose and Buttimer write. "Our new mortgage automatically resets the principle balance at various dates to the minimum of the originally scheduled balance or the value of the house, reducing the borrower's incentive to default if the house value declines."

At origination, the adjustable balance mortgage resembles a fixed-rate mortgage -- it has a fixed contract rate and is fully amortizing. From that point on, at fixed, pre-set intervals, the value of the house would be determined based on changes to a local house price index. If the house

value is found to be lower than the originally scheduled balance for that date, the loan balance is set equal to the house value, and the monthly payment is recalculated based on this new value. If the house retains its initial value or increases in value, then the loan balance and payments remain unchanged, just as in a standard fixed-rate mortgage.

For example, if a homeowner was found to owe more than the current market value of her home at one of the predetermined quarterly adjustment dates, then her balance would reset to the current market value and her monthly payment would be lowered as a result. At the next reset interval, if the market had recovered and the house was now worth more than what the homeowner owes, the mortgage balance reverts back to the originally scheduled balance, resulting in a higher monthly payment but one that does not exceed the payment specified at origination.

This new arrangement results in a sharing of the home-price risk between lender and borrower while providing an economic incentive for the borrower to maintain the property even during significant price declines.

"Before the loan balance is reset, the borrower will have lost whatever initial equity they had in the property, plus any equity that they would have built-up through the amortization process," the researchers write. "Should the house price fall below the balance triggering a reset, and the house value then subsequently rises, the lender recovers their lost value first. In addition, if the house value rises above the originally scheduled balance on a reset date, then the owner begins to recover their equity as well."

Through financial modeling and analysis, Ambrose and Buttimer determine that the adjustable balance mortgage would have a lower contract rate than the standard fixed-rate mortgage when the loan-to-

value ratio is above 80 percent. Further, they find that their new mortgage provides lenders with an incentive to use a derivative contract to hedge against the risk of home price declines.

According to Ambrose, analysis of this new mortgage provides insight into why the federal loan modification programs are not as successful as expected. The modification plans presented by the U.S. Treasury, Federal Reserve, and FDIC focus strictly on borrower payment-to-income ratios, and, as a result, do not remove the incentive to default for long. In fact, the Office of the Comptroller of the Currency has reported that up to 37 percent of modified mortgages were 60 days into a second default within six months of the modification.

"The only way to truly reduce the default probability is to either reset the [mortgage](#) balance to a LTV that is lower than 100 percent, probably around 80 percent, or have frequent, predictable balance resets," Ambrose says. "The key implication is that the programs rolled out by U.S. regulatory authorities will not significantly reduce defaults unless house prices rapidly stabilize or go up, independent of issues such as moral hazard."

**More information:** "The Adjustable Balance Mortgage: Reducing the Value of the Put" is scheduled for publication in a forthcoming issue of *Real Estate Economics*.

Provided by Pennsylvania State University

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