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Mortgage Innovation and Consumer Choice

As 2006 draws to a close, one economic development that stands out over the year is the slowdown in the housing sector. In particular, the slowdown raises concerns about the perceived shift households have made toward "alternative" mortgage products, which may leave them more exposed to negative effects from higher interest rates and falling house prices. In this *Economic Letter*, I take a somewhat longer view and put alternative mortgages in the context of the history of innovation in the U.S. mortgage market. I then examine the ways in which this innovation may be affecting the housing consumption decisions facing U.S. households.

What are alternative mortgages?

The U.S. mortgage market offers a rich variety of financing options that give homebuyers flexibility in timing their mortgage payments (see Green and Wachter 2005 for a survey of mortgage market developments with international comparisons). The standard product in the U.S. has long been the 30-year fixed rate mortgage (FRM). Because the mortgage is scheduled to be paid off gradually (amortized) over a long period, the household is not exposed to the risk of having to renegotiate the loan balance during bad economic times. Furthermore, because the rate on the FRM is constant, the household's mortgage payments will not rise if the overall level of interest rates goes up. The 30-year FRM was originally designed to avoid the refinancing risk that contributed to the banking crisis during the Great Depression (ironically, mortgages prevalent then were very similar to today's "alternative mortgages," though the maturities typically were shorter). But a main reason for its enduring popularity is the long amortization period that results in lower monthly payments, making it easier for more households to qualify. Indeed, a constant theme in the history of the mortgage market is that new products generally serve to ease borrowers' credit constraints.

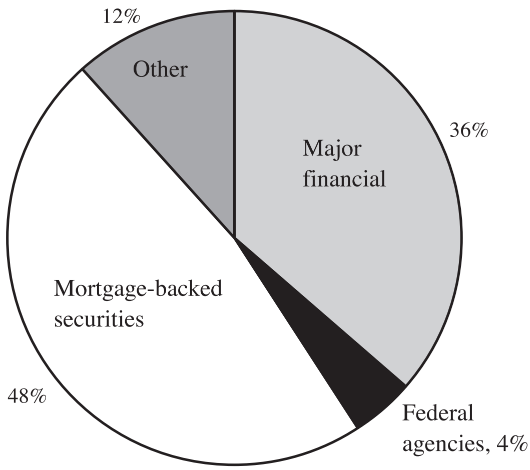
One such new product was adjustable rate mortgages (ARMs), where the interest rate is reset periodically. Although these instruments expose the household to interest rate risk, they also typically offer lower rates than FRMs and, therefore, lower initial mortgage payments, which can help homebuyers qualify for larger mortgages relative to their current income.

The term "alternative mortgage" is generally applied to variants of the ARM, where households take on interest rate risk and have some latitude for controlling the amortization schedule of the loan; for example, with hybrid loans, the interest rate is fixed for a period before either being paid off with a balloon payment or reverting to an adjustable rate, and with interest-only loans, the monthly payments contain no principal repayment for a set period. Another variation is an option-ARM, which allows borrowers to make less than the full monthly payment on the mortgage, rolling the difference into the current principal balance; this type of mortgage belongs to the general class of "negative amortization" loans, where the size of the liability can be allowed to increase during the life of the loan.

It is difficult to get a clear picture of the prevalence of alternative mortgages. The only reliable and publicly available source of data is for those mortgages that have been pooled into mortgage-backed securities (MBS). In 2006:Q2, this portion accounted for just under one-half of the mortgage debt outstanding (see Figure 1). The other half of the market is held predominantly by financial institutions, such as banks (36% as of 2006:Q2), and "others," such as real estate investment trusts and state and local agencies (12% as of 2006:Q2).

About 60% of the outstanding MBS are insured or guaranteed by government-sponsored enterprises (GSEs), such as Fannie Mae and Freddie Mac. The GSEs have relatively strict underwriting guidelines, and few, if any, of their insured or guaranteed MBS will include the more exotic and risky alternative mortgages. So for information on the amount of alternative mortgages currently outstanding, one turns to the "private-label" or "non-agency" piece of the market. Private-label MBS have been growing rapidly and currently account for about 40% of the

Figure 1
Mortgage debt outstanding by holder, 2006:Q2



Source: Federal Reserve Board of Governors.

MBS outstanding. According to LoanPerformance (2006), about 25% of the origination in 2006:Q2 pooled into private-label MBS consisted of interest-only loans, and about 7% allowed for negative amortization. These percentages of new origination probably overstate the share of these mortgages in the total private-label MBS outstanding, because outstandings include loans originated before these mortgages became so popular. These figures do, however, provide an upper-bound estimate, namely, that interest-only and negative amortization loans make up about 10% and 3% of the total MBS outstanding, respectively. As stated above, there is no comprehensive public information on the composition of the 50% of the mortgage market that is not in MBS.

Some motives for choosing alternative mortgages

One motive for choosing an alternative mortgage could be related to the projected length of stay in the home. If a buyer knows with certainty that she will move in the next three years, an ARM is likely to be cheaper than a 30-year FRM, since the "insurance" against interest rate fluctuations she "buys" with an FRM is for up to 30 years, much more than is needed. The homebuyer could lower her payments further if she took out an interest-only loan, and further still if she took out an option-ARM loan and let her principal rise. This option would have the additional benefit of allowing the homeowner to smooth through temporary shocks that affected her labor income or wealth.

Another possible motive for choosing an alternative mortgage is to improve the match between payments and expected income. For households expecting real income to rise over time, it may be desirable to smooth housing consumption by allocating a higher share of income to housing early in life. Consider the income profile of a 25-year-old college graduate who earns $50,000 a year (the median income is slightly lower). On average, this individual can expect his income to nearly double in real terms from age 25 to age 55; that is, his "permanent income" is higher than his current income. If he were to borrow $300,000 using a 30-year FRM at 6.5% to buy a house today, the initial mortgage payments would amount to just over 45% of current income. While this purchase would result in an initial period of being "house poor," the mortgage would be much more manageable later in life as income grows. However, even if the borrower is willing to endure a period of high payments relative to income, lenders may not be willing to lend to someone so exposed to fluctuations in that income. If the lender imposes limits—say, 35%—on the size of the mortgage payment relative to current income, then the borrower would be able to take out only a $230,000 loan. That limit might mean buying a smaller house, and it could even preclude the borrower from entering the market at all.

With an alternative mortgage, the borrower might be able to lower the payment in the initial years to levels consistent with the 35% payment-to-income cap. While payments can be expected to rise over time, the household expects income to rise, too. The alternative mortgage does shift risk to the borrower, but the trade-off could be acceptable, since the payments are matched better with future income. In this example, the borrower can smooth housing consumption with the use of an alternative mortgage loan.

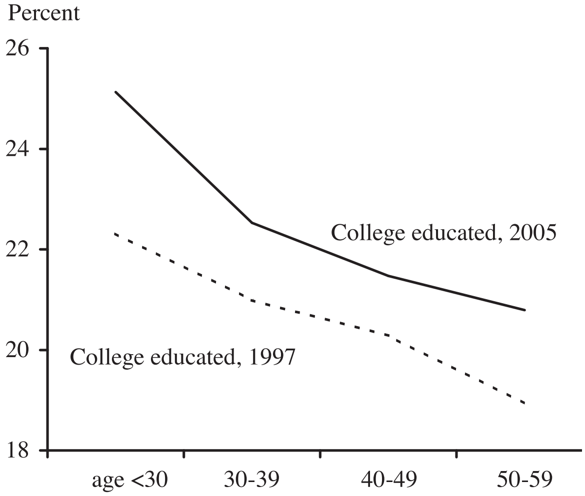
Changes in housing consumption patterns

Sorting out the effects of the mortgage market developments discussed here on actual consumer choices is difficult for a number of reasons. First, the main consumer surveys that contain useful information on demographic characteristics and housing consumption generally do not include such fine details about the terms of the household's mortgage. Second, the growth of alternative mortgages has not been the only mortgage market development over the past decade. Other developments, such as the decline in down payment rates and the ease with which consumers can refinance, may also have played a role in recent consumer behavior. Third, alternative mortgages have become popular primarily in the past few years, and there simply has not been enough time to observe the full ramifications of these products on consumer choice.

For some households, however, we can already detect important changes in consumption patterns that appear to have coincided with the loosening of mortgage market constraints. Doms and Krainer (2006) examine data from successive American Housing Surveys and report a substantial increase in expenditures on housing relative to income between 1997 and 2005, when alternative mortgage products took hold (Figure 2). This increase in expenditure shares, which is observed for households of all ages and education levels, is consistent with a general increase in the demand for housing. To be sure, for some households, these changes might reflect the greater liquidity of housing as an asset. Indeed, the extraction of home equity has had some effect on the measured share of housing costs to income, as homeowners tapped built-up equity to reduce other debt and finance other consumption.

What is notable in Figure 2 is the upward shift over time in the housing expenditure shares for households in the youngest age groups. These are also the households which have enjoyed large gains in homeownership rates. Doms and Krainer find that these results hold true across all income quintiles and levels of educational attainment and do not depend on market location; that is, the higher expenditures do not simply reflect higher house prices. They also find that young households are more likely to have primary mortgages with lower interest rates than are similarly situated but older households. More specifically, this incidence of low mortgage interest rates is most prevalent among young households that have high incomes (relative to other young households) and that are highly educated. These results do not prove that young households are more inclined to borrow through alternative mortgages, though these are, of course, precisely the people expected to have high permanent income relative to current income and, seemingly, those with the most to gain from using alternative mortgages. What the research appears to confirm, then, is that households have a desire for greater housing consumption than they had in the past. Moreover, the shift is quite apparent among borrowers that might be expected to be more constrained using traditional mortgage loan options. This may be a reason, then, behind the consumer demand for alternative mortgage products.

Figure 2
Housing expenditure-to-income age profiles by year



Source: American Housing Survey and author's calculations for household of two prime adults with two children.

Conclusion

Alternative mortgage products represent another stage in the long history of innovation in the mortgage market. As with past innovations, these new products have the potential to ease credit constraints and better match mortgage obligations with the personal characteristics of borrowers. In this light, these products probably enhance welfare because they enhance choice. But there is also little question that these products convey more risk onto the borrowing household. In the near term, if the housing market or the economy were to slow, an important question will be whether borrowers and lenders have fully factored in these risks.

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