

BAKER VIEWPOINT:

Curtailment Mortgages are a Win-Win Economic Policy



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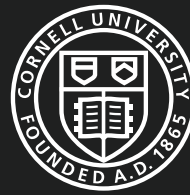
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Matthew Farrell

Matthew is pursuing a Masters in Real Estate from the Baker Program and an MBA from the Johnson School of Management. Prior to Cornell, Matthew worked for several years as a Senior Research Analyst for CBRE in San Francisco. He also spent time working for a luxury condo developer in the Bay Area after completing his bachelor's degree from Brigham Young University. Matthew plans to pursue a career in development with an emphasis on multifamily and mixed-use urban projects.





Introduction

What happens if you prepay your standard residential mortgage? This question puzzles most people, and worse yet the answer can be even more confusing. However, a minor policy change that alters how prepayments are applied could benefit mortgage borrowers as well as the overall housing market.

When mortgage holders prepay, the prepayment applies to the principal owed at the end of the amortization period. This keeps the payment amount the same, but shortens the term. Borrowers may not consider this an attractive option, as the benefit will occur in 15, perhaps 20 years in the future. By then, they will likely have moved once or twice. In addition, because the payment amount remains the same there is no immediate benefit.

The alternative is called a “curtailment prepayment.” Here is how it works: the prepayment curtails the monthly payment amount rather than the full term, keeping the amortization term the same. The payment amount is curtailed such that the lender’s yield remains intact for the same term. The practice has been detailed and recommended to the U.S. Department of Housing and Urban Development by Cornell Professor Dan Quan, Academic Director of the Center for Real Estate and Finance at the School of Hotel Administration.

I. THERE ARE TWO MAJOR BENEFITS OF THIS POLICY: ONE FOR BORROWERS, AND ONE FOR LENDERS.

For borrowers, their monthly payment decreases. This effectively increases the borrower’s disposable income on a permanent basis, akin to receiving a raise. Borrowers may thus use transitory income (work bonus, inheritances, gifts, or annual tax refund) to boost their permanent income. Permanent income increases could have a substantial impact on the economy by boosting permanent consumption patterns among individuals.

For lenders, the monthly payments of their borrowers decreases relative to their incomes. This makes the mortgages safer, as the likelihood of default decreases. Over time, securitized mortgage pools may even gain higher ratings, since the overall pool risk of default is effectively reduced.

The only negative point to this for lenders and securitized bondholders is the fact that monthly cash flows have been

reduced. However, since the term remains constant, the change is yield-neutral. Full prepayments likely happen at the same rate as they would otherwise, as households will move or relocate at the whims of the labor market or economic situation. The full effects of this new mechanism will not be possible to determine until it has been utilized for several years. The market will be the ultimate determinant in whether curtailment is a viable practice.

II. WHAT COULD THIS DO FOR THE ECONOMY?

To estimate the effect such a policy would have on consumption, we will need to begin by examining several key metrics and assumptions. Principal among these is the number of outstanding home mortgages in the United States, as well as the typical amount of principal outstanding of those mortgages. 2013 Data from the U.S. Census Bureau’s American Housing Survey reveals the number of regular mortgages and home-equity mortgages to be over 47.7 million, with a median outstanding principal amount of \$121,324. This data also reveals that the median current interest rate for home mortgages is 4.5%. With an assumed average term of 25 years, monthly mortgage payments for the average U.S. homeowner equal \$682, which is roughly consistent with the reported annual mortgage expenditure for homeowners per the 2013 Consumer Expenditures Survey. This is a critical number to watch, because it will shrink in relation to estimated curtailment payments.

To determine the reduction that curtailment prepayments would have on an individual’s regular mortgage payments, a range of prepayment lump sums was examined. With prepayments ranging from \$1,000 to \$10,000, annual payments were reduced anywhere from \$66.70 to \$667.00. While these numbers may seem small on their own, it is important to recall that these payment reductions are added to an individual’s permanent income, augmenting their purchasing power every year. This means that the savings will continue from year to year, and will be compounded by further curtailment prepayments.

Taking this one step further, we sought to determine the effect that widespread curtailment prepayments would have on the US economy as a whole. Once again, several key metrics are necessary to arrive at this estimation. First, we will need to know the average American's marginal propensity to consume, which would allow us to estimate any increases in homeowner expenditures caused by an increase in permanent income. This data, obtained from the Bureau of Labor Statistics' Consumer Expenditures Survey, reveals that homeowners with a mortgage have annual expenditures totaling 74.2% of total income.

By connecting this increase in an individual's permanent income with their average propensity to consume, we can get an estimation of what effect a curtailment prepayment can have on personal consumption. Multiplying this rate by the number of mortgages outstanding reveals the cumulative effect on national consumption, and therefore GDP. Using our given range of curtailment prepayments, this increase can range anywhere from 2.3 billion to 23.6 billion. Keep in mind that this is just the increase that will occur from a one-time prepayment. If mortgage holders continue to make curtailment prepayments year after year, the subsequent, cumulative effects will be compounded and magnified.

Curtailment Prepayment	Principal	PMT	Annual Payment	Annual Payment Reduction
1,000	120,324	\$668.80	\$8,025.60	\$66.70
2,000	119,324	\$663.24	\$7,958.90	\$133.40
3,000	118,324	\$657.68	\$7,892.20	\$200.10
4,000	117,324	\$652.12	\$7,825.50	\$266.80
5,000	116,324	\$646.57	\$7,758.80	\$333.50
6,000	115,324	\$641.01	\$7,692.10	\$400.20
7,000	114,324	\$635.45	\$7,625.40	\$466.90
8,000	113,324	\$629.89	\$7,558.70	\$533.60
9,000	112,324	\$624.33	\$7,492.00	\$600.30
10,000	111,324	\$618.77	\$7,425.30	\$667.00

