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Spillover effects of continuous forbearance mortgages

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ABSTRACT

This paper examines the potential market impacts of continuous forbearance mortgages (CFM). This mortgage design embeds an insurance contract at origination that reduces the interest bearing balance to the smaller of the unpaid balance and an estimate of the current home value in exchange for an additional premium in the mortgage note rate. Thus the CFM mortgage payment is reduced in periods in which the estimated home value falls below the unpaid balance and is reduced fractionally based on the ratio of home value to loan balance. We consider a counterfactual in which all U.S. mortgages had this CFM feature at the start of 2006 and estimate the mortgage payment savings to borrowers at a loan level. Estimated mortgage payment savings are then used to estimate the effect on mortgage default. At the aggregate level, the sum of the mortgage payment savings at the state level is used to estimate potential impacts to regional employment.

1. Introduction

The centrality of mortgage default in the Great Recession has heightened interest in alternative mortgage contracts with automatic adjustments to mortgage terms during the life of the loan in

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response to declines in regional house prices. These contracts assist households by making mortgage payments more affordable in a house price downturn. By increasing the income available after mortgage payment, such a contract would increase overall household spending, providing stimulus targeted to markets with house price declines. The purpose of this paper is to examine both the costs to borrowers of requiring such mortgage terms and the potential regional impacts of the universal adoption of one such alternative. We focus our attention on the potential impacts to economic variables such as income, employment, and mortgage default. Other potential positive spillover effects of these contracts, such as moderating drops in house prices and achieving neighborhood stabilization are important but are not the focus of this paper.

There are three distinct motivations in considering embedded modifications in a mortgage contract. The first is overcoming operational barriers to mutually beneficial loan modifications during periods of high delinquency volume. During the recent crisis operational and legal frictions hampered the creation of large numbers of loan modifications. Some forms of loan modification can be mutually beneficial from both the borrower's and the investor's standpoint—typically when a loan has a very high likelihood of default and loss. In such cases, operational barriers to modification reduce the ability to achieve potentially Pareto-improving restructuring. The second motivation is insuring homeowners against future declines in house prices, with the mortgage holder effectively providing homeowners with transfers when there is negative equity in exchange for a premium payment. There can be opportunities for risk sharing ex ante between investors and borrowers—that in exchange for a premium the household can be provided with extra liquidity when they experience negative home equity due to regional house price declines. The willingness of a household to pay for such insurance would depend on how much the homeowner values staying in their home and on their risk aversion. The third motivation is to provide countercyclical stimulus to markets hit by house price declines. The main focus of this paper will be to estimate the magnitude of counter cyclical stimulus generated by one specific type of embedded modification.

This paper proposes the Continuous Forbearance Mortgage (CFM) contract which reduces mortgage payments for mortgages with negative equity. Specifically, the CFM embeds an insurance contract at origination that reduces the interest bearing balance to the smaller of the total unpaid mortgage balance and an estimate of the current home value[1]. The portion of the unpaid balance above the home value that does not accrue interest is considered to be in forbearance. Forbearance is a commonly used feature found in many loan modifications. The CFM builds in automatic forbearance in proportion to the degree to which a home is underwater, but keeps the outstanding principal balance and the amortization schedule unchanged. The estimate of house value used to determine the equity position of the mortgage would be pre-specified, and could be, for example, constructed using the origination price adjusted by a repeat-sales index-based multiplier. The use of a house price index in contrast to the actual home value eliminates the incentive to game the contract through value reducing practices such as postponing maintenance, but does introduce basis risk. In some cases, the regional indexes will not track the changes in the value of a given property.

Why the CFM? The CFM focuses solely on payment reduction in contrast to alternative contracts that involve balance reduction such as the Continuous Workout Mortgages (CWM) considered in Shiller, Wojakowski, Ebrahim, and Shacketon (2013)[2]. Eberly and Krishnamurthy (2014) provide theoretical arguments in favor of mortgage modifications that reduce payment rather than balance. Empirically, one of the lessons from the recent mortgage crisis is the relative strength of payment reduction in lowering default rates (see for example, Scharlemann & Shore, 2015). The relative strength of payment reduction suggests that the CFM contract could provide a more cost efficient way of lowering default, and consequently lower the cost of the embedded option to the borrowers.

The mechanism through which the CFM directly reduces default rates is suggested by the 'dual trigger' theory of mortgage default, in which both the liquidity of the household's balance sheet and

[1] The CFM could also be generalized to provide a range of payment reductions. For example, an alternative might be to have payment decrease by a multiple of the negative equity, capped at some level. Note the CFM could be offered as a separate product from the mortgage contract and be provided by a broader range of vendors beyond mortgage lenders.

[2] Shiller (2008) broadly defines continuous workout mortgages that would include monthly adjustments in mortgage terms in response to changes in homeowner income and home equity.

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