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The tradeoff between mortgage prepayments and tax-deferred retirement savings ☆

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Abstract

Many households face the tradeoff between paying an extra dollar off the remaining mortgage on their house and saving that extra dollar in tax-deferred accounts (TDAs) used for retirement. We show that, under certain conditions, it becomes a tax arbitrage to reduce mortgage prepayments and to increase TDA contributions because of the tax deductibility of mortgage interest and tax-exemption of qualified retirement savings. Using data from the Survey of Consumer Finances, we document that a significant number of households that are accelerating their mortgage payments instead of saving in TDAs forgo a profitable tax arbitrage opportunity. Finally, we show empirically that this inefficient behavior is unlikely to be driven by liquidity or other financial constraints. Rather, the observed behavior can be attributed to a certain extent to the reluctance of many households to participate in financial markets as either lenders or borrowers.

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"Neither a borrower nor a lender be;

For loan oft loses both itself and friend,

And borrowing dulls the edge of husbandry."

— William Shakespeare

1. Introduction

Many households are reluctant to participate in financial markets either as lenders or as borrowers. According to the 2001 Survey of Consumer Finances (SCF), nearly half of U.S. households do not own stocks and more than one-third of the households eligible for employer-sponsored retirement plans do not contribute at all to such plans. Furthermore, some households are also averse to carrying debt. At a first glance, this runs counter to stylized facts on the proliferation of consumer borrowing, especially in unsecured credit markets. Yet, a surprising number of households accelerate paydowns of their mortgage loans, which account for a larger share of their debt. We show that these choices generate substantial monetary costs for a significant number of households.

This paper focuses on two of the most important financial decisions of households: retirement savings and home ownership borrowing. Many households, at one time or another, face the tradeoff between paying an extra dollar off the remaining mortgage on their house and saving that extra dollar in tax-qualified retirement accounts. In a world without frictions, paying off mortgage loans early and investing in retirement accounts would be equivalent saving decisions. In reality, however, taxes and transaction costs play a key role in the determination of the effective borrowing and lending rates. We show that, under certain conditions, it becomes a tax arbitrage to reduce mortgage prepayments and to increase contributions to tax-deferred accounts (TDAs).³

Mortgage interest payments are deductible from taxable income for households that itemize their deductions, while investment income in retirement accounts remains effectively tax-exempt. Hence, households earn pre-tax returns $(r_{\rm L})$ in their retirement accounts and pay after-tax rates $(1-\tau)r_{\rm B}$ on their mortgage borrowing. Although the borrowing rate $(r_{\rm B})$ on the mortgage is likely higher than the investment rate $(r_{\rm L})$ for an asset with similar risk properties, we show that, as long as $r_{\rm L} > (1-\tau)r_{\rm B}$, households are generally better off saving in a TDA instead of prepaying their mortgage. Given the simplicity of this strategy, it is reasonable to ask whether and to what extent households recognize this tradeoff in their personal decisions.

Using data from the Survey of Consumer Finances, we investigate household choices between mortgage prepayments and retirement account contributions. While it is not surprising that some households are not making the right choice, the magnitude of the overall inefficiency is striking. On the margin, at least 38% of households that prepay their mortgages could benefit from our proposed arbitrage strategy. Depending on the choice of the investment asset in the TDA, the average annual consumption gain from such a reallocation ranges between 11 and 17 cents per

³ Throughout the paper, we use the term "mortgage prepayment" to denote extra payments on an existing mortgage (which is commonly known as "curtailment" in the industry) or taking out a mortgage with a maturity shorter than the standard 30 years. Short maturity mortgages carry higher periodic payments, which can be considered committed prepayments in the same sense as writing extra checks to the mortgage company. We do not include mortgage refinancing in our definition of "prepayments," although this interpretation is common in the industry.

⁴ Consider, for example, a Roth account where households pay income tax when they contribute and no more tax is owed upon withdrawal. Also, when tax rates are constant over time, investing in a tax-deferred account is equivalent to investing in a Roth account.

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