The Home Mortgage Loan Crisis: A Lesson in Ignoring Sunk Costs

Bhavneet Walia
Western Illinois University

The present paper discusses the home mortgage crisis as a lesson in ignoring sunk costs. In a spot sense, the crisis caused prior mortgage payments to become a sunk cost for millions of Americans. Of those households with an "underwater" mortgage loan, however, the foreclosure rate is estimated to be less than twenty percent. Using these numbers and quotes made by homeowners, the study discusses the consequence of failing to ignore sunk mortgage loan repayment costs. Particularly, such a logical failure likely impedes millions of homeowners from choosing to foreclose—even when it is optimal to do so. Optimal foreclosure is often considered to be a matter of one's solvency. During times of market downturn, however, the issue of sunk mortgage repayment costs is also relevant.

INTRODUCTION

The recent home mortgage crisis has provided several potential economic lessons to economists, policy makers, and members of the American public at large. Prominent among these is the lesson of ignoring sunk costs. A sunk cost is one that has already been incurred and cannot be recovered by any sort of pursuant behavior. Given that they cannot be recovered, sunk costs should be ignored in any type of marginal decision-making. Examples of sunk costs include wedding receptions, DVD purchases (Landsburg 2008), and concert tickets (Frank 2003; Potter and Sanders 2012). In contemplating the termination of a wedding plan, one should not consider how many non-refundable dollars were paid to the caterer. In contemplating the premature termination of a movie viewing, one should not consider how much was paid for the DVD. In contemplating whether to attend a rain-plagued concert, one should not consider the cost of the ticket. Staw and Hoang (1995) show that National Basketball Association teams are unable to ignore sunk costs in making roster and playing time decisions. If a team drafts two players who turn out to be of poor quality, for example, the higher drafted player is expected to receive more opportunity to "prove himself," *ceteris paribus*. In marginal decision-making, an optimal decision involves only the consideration of marginal (additional) benefits and marginal (additional) costs.

In a spot sense, past mortgage loan repayments can sometimes be considered as sunk costs. This is true because they have already been incurred and provide no guarantee that the homeowner will preserve market equity in the home. This point is important given the large number of individuals who are "underwater" on a mortgage loan (i.e., the outstanding mortgage loan liability is greater than the current market value of the home) and considering whether it is best to default.

A recent *USA Today* article ("On Helens Pouroff Ave., escaping falling home prices," June 12, 2011) profiles a neighborhood in Las Vegas—Helens Pouroff Avenue—that experienced markedly declining home values during the course of the home mortgage crisis. Between 2006 and June 2011, houses in the neighborhood declined in sale price from an average of $385,000 to an average of $180,000. The article

states, "Dayna and Scott Merritt ask themselves almost every day if they should keep paying their mortgage…Since the 69 new homes on this street were sold in 2006, almost half the owners have defaulted on their mortgage." According to the article, there are many millions of families who, like the Merritt family, continue to pay on a mortgage loan despite being "underwater." In June 2011, an estimated 11 million U.S. homeowners were underwater on their mortgage. Of those, market researcher *CoreLogic* predicts that 2 million will go into foreclosure or distressed sales. It is perhaps difficult to explain the abundance of "Merritts" in the United States (i.e., those loyal to an investment that has gone bad) without considering the role of sunk costs.

DISCUSSION

When deciding whether to default on a mortgage loan, one should consider the market value of the home against the value of the outstanding liability. With limited exceptions, we can say that one should always foreclose upon a house when the market value of the house has slipped "sufficiently" below the outstanding mortgage liability. Let us explain this statement by assuming an individual, Fred, who has owned a house for a few years. Fred bought the house for $230,000 and owes the bank $190,000 in outstanding mortgage liability. Due to market downturn, the house now has a market value of only $155,000. What is Fred's best course of action in this case given that a) he is solvent to continue paying the loan, b) he wishes to maintain the same level of housing for the lowest "price", and c) he has no emotional attachment to his current house? If Fred is not apt to ignore sunk costs, he might be tempted to commit the following fallacy:

> *I've already paid off $40,000 on the house and can only save $35,000 (minus the cost associated with discounting my credit rating) by defaulting and buying a similar house. As $40,000 is greater than $35,000, I should stick to my present home.*

In failing to ignore sunk costs, Fred is foregoing a real $35,000 benefit in favor of an imagined $40,000 benefit. As the market adjustment has eroded Fred's "paper equity" (i.e., purchase price minus outstanding liability) plus $35,000, it is correct for Fred to view the $35,000 (minus the cost associated with damaging his credit rating) as a net benefit rather than as a gross benefit.

Subject to thickness of housing market, Fred is best off if he defaults on his current mortgage loan, loses his current house, and buys or rents a similar house for $155,000 (or the rental equivalent of this price). In doing so, Fred will receive the same housing quality for a "price" that is $35,000 less. Of course, Fred will damage his credit score in maneuvering this transaction. However, he should make the trade if credit score preservation is worth less than $35,000 in present value terms. Given his objectives, Fred's relevant information set involves the marginal cost of remaining in his current house and the marginal cost of trading his current house for a similar one. It does not directly involve the starting value of the home, the number of dollars he has spent on mortgage loan repayment (of principle and interest), or his ability to repay the loan. Previous payments of the liability are relevant to the issue of optimal loan default only insofar as they have reduced the outstanding liability. Fred's switching rule for housing is as follows:

FIGURE 1: SWITCHING RULE INEQUALITIES

$$Switch\ if: MC_{Switching} < MC_{Staying}$$
$$Stay\ put\ if: MC_{Switching} > MC_{Staying}$$

Another way to put this rule is as follows.

FIGURE 2: SWITCHING RULE INEQUALITIES DECOMPOSED

Switch if: *current market value + credit score cost < Outstanding liability*
Stay put if: *current market value + credit score cost > Outstanding liability*

Let us assume that Fred's credit score cost of switching houses is $5,000. If he ignores sunk costs, he will switch houses. He will do so because his outstanding liability ($190,000) is greater than the sum of his current market value and credit score cost of switching ($160,000). Moreover, Fred will be $30,000 richer for his decision. Individuals who fail to ignore sunk costs follow a different rule. Such decision-makers feel that sunk costs *should have* resulted in benefit. Therefore, they act as if sunk costs did result in benefit. For example, an NBA team believes that a top draft pick should benefit them. When a top draft pick turns out to be of low productivity in the NBA, however, most teams act as if that pick has benefited them by giving him additional playing time opportunities. Similarly, a homeowner does not wish for his or her mortgage payments to be of no benefit in terms of accruing market equity. When such an outcome occurs, therefore, it appears that many homeowners act as if their mortgage payments did accrue market equity. Such a homeowner follows this alternative rule.

FIGURE 3: SWITCHING RULE WHEN SUNK COSTS ARE NOT IGNORED

Switch if: *current market value + sunk cost + credit score cost < Outstanding liability*
Stay put if: *current market value + sunk cost + credit score cost > Outstanding liability*

If Fred erroneously recognizes sunk costs as realized benefits, he will stay put in his current home. He will do so because his outstanding liability ($190,000) is less than the sum of his current market value, sunk cost, and credit score cost of switching ($155,000 + $40,000 + $5,000 = $200,000). In recognizing the sunk cost, Fred will be $30,000 poorer than if he had switched rather than $10,000 richer. Staying in his current home does not bring ($40,000 of) value to his prior mortgage payments.

CONCLUSION

As was stated in the opening passage, approximately 11 million borrowers in the United States were underwater on their mortgage as of June 2011. Of these, an estimated 2 million will default on their mortgage loan. It is likely that many of the estimated 2 million will simply be unable to continue paying their loan due to insolvency. Therefore, we can infer that relatively few solvent, underwater borrowers *choose* loan default. Could it be that the other 9 million are "under shallow water" such that the credit cost of defaulting is greater than the amount by which they are under water? This may be true in some cases. However, it is likely that many borrowers simply refuse to ignore sunk mortgage repayment costs. Like Fred or the Merritts, these individuals may be trying to redeem a sunk cost.

REFERENCES

Frank, R. (2000). *Microeconomics and Behavior*. 4th Edition. McGraw-Hill.
Landsburg, S. (2008). *Price Theory & Applications*. 7th edition. Thomson South-Western.
Potter, J., & Sanders, S. (2012). Do Economists Recognize an Opportunity Cost When They See One? A Dismal Performance or an Arbitrary Concept?.*Southern Economic Journal*, *79*(2), 248-256.
Schmit, J. (2011). "On Helens Pouroff Ave., escaping falling home prices." June 12, 2011 USA Today Online Edition, Available at: http://www.usatoday.com/money/economy/ housing/2011-06-12-mortgage-default_n.htm
Staw, B. M., & Hoang, H. (1995). Sunk costs in the NBA: Why draft order affects playing time and survival in professional basketball. *Administrative Science Quarterly*, 474-494.