POINTS OR NO POINTS:
AN ANALYSIS OF RESIDENTIAL HOME FINANCING OPTIONS

Jerry Belloit, Clarion University of Pennsylvania
Anthony Grenci, Clarion University of Pennsylvania

ABSTRACT

Homeowners today face an ever increasing myriad of home financing options. The choice of the optimal financing plan is complicated by decisions on the financing rate, the financing costs, the amount of the monthly payment, the anticipated duration of the loan, and the after-tax costs of the loan. This paper will examine the tax impact of various financing alternatives as a basis for choosing the best loan opportunity.

INTRODUCTION

The widespread popularity of no or low-point home mortgage financing is apparently increasing judging by the numbers of television commercials promoting them. This paper will examine the financial consequences of using a lower-point financing option relative to buying down the interest rate through paying higher up-front loan fees.

The choice of an optimal financing plan for a homeowner involves the consideration of several important factors. These factors that influence the choice of the optimal financing plan include the mortgage rate and the resulting amount of the monthly payment, the pre-paid financing costs, the expected duration of the financing, and the tax consequences of the financing alternatives. These factors are often competing in opposite directions making the decision somewhat complicated.

Gardner and Clark (2003) point out that the decision to trade off points for an interest rate deduction is further complicated by the need to assess the homeowner's cost of capital. The homeowner's cost of capital is the interest that the homeowner would earn if, instead of paying the points for the reduced interest rate, the homeowner invested the money somewhere else.

TAX IMPLICATION OF MORTGAGE FINANCING

Deductibility of Interest Expense

In general, interest paid on personal loans is not a deductible item for federal income tax purposes. (This paper considers the deductibility of mortgage points paid on personal residence loans for federal income tax purposes. The deductibility for state, local, or other tax purposes is beyond the scope of this paper and the impact is assumed to be insignificant in comparison to the effect from federal taxes.) However, within limits exceptions exist for interest paid on personal residence mortgage, investment, and student loans. Interest paid includes the portion of a traditional installment loan payment that is a charge for the use of borrowed money, as well as points, which is interest paid in advance. All other personal interest paid is not deductible. The deductibility of interest paid on personal residence mortgages varies depending on the terms of the loan and other factors discussed below. To the extent the above-mentioned mortgage interest and points is allowable as a deduction; it would be claimed on Schedule A as an itemized deduction.

The Internal Revenue Service (IRS) allows certain personal and employment-related expenses to be subtracted from a taxpayer's adjusted gross income. Individual taxpayers are entitled to either an automatic (standard) deduction or their actual deductions if they keep a record of (itemize) them. Generally, taxpayers opt for the larger of the two deductions, standard or itemized, and therefore claim their actual expenses only if the itemized deduction exceeds the standard deduction. The component of itemized deductions that is relevant to this paper is mortgage points on a personal residence loan, which is part of the Interest category of itemized deductions. There are seven categories of itemized deductions: Medical, Taxes, Interest, Charitable Gifts, Casualty and Theft Loses, Employment Related, and Miscellaneous. Of these seven, Interest is the largest category. Approximately 40% of all itemized deductions claimed by taxpayers are for the payment of interest expenses. Following is a discussion of the deductibility of the interest expense for mortgage points. However, keep in mind that even if points are deductible, the taxpayer may not claim them if the taxpayer opts for the standard deduction.

Points are one component of the interest expense deduction. Points are prepaid interest, where one point equals one percent of the loan amount. Points have several names in practice, including points, loan discounts, and discount points. For consistency the term points will be used throughout this paper to describe payments in advance for the use of borrowed money. Charges that are not prepaid interest but are instead fees for loan services provided by the lender on behalf of the borrower are not points as defined by the IRS and are not tax deductible. Examples of such non-deductible fees would be credit reports, appraisals, and documentation and recording fees. These non-deductible fees would be added to the cost basis of the residence and may have tax implications in the future upon the disposal of the residence.

Deductibility of Points

According to Internal Revenue Code (IRC) Section 461(g) the general rule for the deductibility of points as an itemized deduction is that the taxpayer must claim the points ratably over the life of the loan since the points represent a prepaid interest. Deducting the interest ratably would entail claiming the amount of interest expense that would accrue under the effective interest method. The effective interest method recognizes interest expense based on a calculation of the principal outstanding times the effective interest rate, as opposed to the straight-line method, which would recognize an identical amount of interest each year.

Points are generally claimed over the life of the loan because deductions typically cannot be claimed until they are owed and paid. Prepaid interest would not be owed until the borrowed money is used, which would be in the future as the money is used over the life of the loan. There is an exception to this general rule providing the points are paid for the purchase or improvement of a personal residence. To qualify for the exception the points must meet five conditions. If the five conditions are met then the points will be deductible in their entirety in the year the money is borrowed. The five conditions are:

1. The amount is designated as points on the Real Estate Settlement Procedures Act (RESPA) Settlement Statement (Form HUD-1). The HUD-1 accounts for points on line 802 under the caption "Loan Discount".

2. The points are calculated as a percentage of the principal amount borrowed. Line 802 of the HUD-1 stipulates that the "Loan Discount" (points) must be a percentage of the loan. Note that line 801 "Loan Origination Fee" must also be stated as a percentage, but that amount is not deductible as points because it covers the administrative costs of processing the loan.

3. Paying points must be an established business practice for the geographical area, and the amount of points must not exceed the amount usually charged in that area.

4. The points must be paid from the borrower's own money, i.e., the points cannot be borrowed from the lender.

5. The proceeds of the loan must be used to purchase or substantially improve a principal residence, using that principal residence as security for the loan.

Limitations on Deductions

Limitations may be placed on the amount of points eligible to be deducted in the year the money is borrowed. These limitations are based on whether the IRS designates the loan to be one of acquisition indebtedness or home equity indebtedness. Acquisition indebtedness is created when a borrower uses borrowed funds to buy, build, or substantially remodel a home. That home may be a principal residence, vacation home, or second home. However, in accordance with the fifth requirement above, vacation or second homes do not qualify for the deduction of points in the year the money is borrowed. To be acquisition indebtedness that is eligible for points to be deducted in the loan origination year the borrowed funds must be used on a principal residence. Borrowing money to refinance acquisition indebtedness does qualify as acquisition indebtedness to the extent the borrowed funds were used to replace the acquisition indebtedness. However, points paid when acquisition indebtedness is refinanced must be amortized over the life of the new loan.

Home equity indebtedness is debt created by borrowing money against a home, but not to buy, build, or substantially remodel a home, or refinance acquisition indebtedness. Points paid in the incurrence of home equity indebtedness do not qualify for deduction in the year the money is borrowed. These points must be deducted over the life of the loan.

Point deductibility in the originating year of the loan is limited not only to the type of debt but also to the amount of debt. Acquisition indebtedness after October 12, 1987 is limited to $1,000,000 and home equity indebtedness is limited to $100,000. Further, the total of acquisition indebtedness and home equity indebtedness cannot exceed the fair market value of the home. Points and interest deductions are both limited to the amounts generated on debt that does not exceed these dollar limits. The portion of any points or interest incurred on debt that exceeds these dollar limits is not deductible.

Early Loan Payoff

Paying off a loan before its original due date may have an effect on the deduction of points. If the points were deducted in the year the money was borrowed then paying off the loan early will have no effect. However, if the points could not be deducted in their entirety in the year of loan origination then paying off the loan early will affect the timing of the deduction for the points not yet deducted.

When points cannot be deducted in the year the money is borrowed then they must be amortized over the life of the loan. If the loan is paid off before the points have been amortized then the remaining points may be written off in their entirety when the loan is paid off. However, if the loan is paid off early by refinancing then the un-amortized points must be deducted over the remaining life of the new debt, which was incurred to refinance the old debt. As stated above, this rule applies whether the debt is acquisition indebtedness or home equity indebtedness.

ANALYSIS OF FINANCING COSTS AND TRADEOFFS

Upon first examination, the initially apparent logical choice for a homeowner choosing the optimal financing would be to choose the lowest interest rate. This decision is more complicated, however. Lower interest rates frequently require higher up-front fees. These higher fees are problematic when the lender is unwilling to finance the fees by adding them to the mortgage principle. If the additional fees cannot be financed, some homeowners may not have sufficient capital to take advantage of the lower rate.

Loan Amount Tradeoff

To further complicate the lower rate decision, homeowners are able to borrower a higher amount as the payment declines. To demonstrate this factor, assume a homeowner has no other debt and a $35,000 annual gross income or $2,917 per month. Further, assume a traditional mortgage front-end underwriting ratio of 28% and, to uncomplicate the analysis, assume no property tax or insurance escrow requirements. Therefore, monthly payments over 30 years could be a maximum of $817 ($2,917 * 0.28) per month. In this situation, a lender would allow the homeowner to borrow up to $147,892 at a rate of 5.25%. If however, the homeowner paid $2,250 in loan discount fees, the lender would allow a loan of $154,319 at a rate of 4.875%. Thus for a payment of $2,250, the loan amount would increase by $6,426 for the same monthly payment

Amortization Tradeoff

One significant advantage in paying the extra points to get a lower interest rate is that the loan will amortize more quickly when the interest rate is lower. This occurs because the interest charge is lower and consequently the amount of payment available for principle payoff is greater. This greater amortization benefit is often overlooked even in more detailed analyses (see Gardner and Clark 2003 or Kass 2005.) For example, on a $150,000 mortgage, the difference in amortization of a 4.875% and a 5.25% loan after five years is $727.17. Thus, part of the costs to obtain the lower interest rate loan is offset by the increased amortization.

Discount Points Tradeoff

The decision on the amount of pre-paid financing costs in the form of loan origination fees, loan discount fees, and origination expenses is likewise more complicated than might be first assumed. Choosing the lowest cost fees may not be the most cost effective option. Complicating the analysis is the tradeoff between paying higher loan discount fees in exchange for lower interest rates. To effectively analyze the optimal financial package for the homeowner, it is important to know the homeowner's cost of capital, the expected length of time the loan will be active, and the tax consequences of each option.

Fortunately the cost-of-capital determination is not difficult for most homeowners. Their cost of capital is simply the higher of the interest the homeowner is earning on their savings or the interest they have to pay for borrowed money. For many, if not most homeowners, that rate will be the loan rate. If the homeowner is earning a higher rate of return, then simply substitute that rate in the calculations.

Should the homeowner choose a mortgage with a lower rate, the savings from the lower payment is realized only as long as the loan is in effect. For example, if a homeowner is able to lower the monthly payment on a 30-year, $150,000 mortgage from $828.31 (5.25% interest rate) to $793.81 (4.875% interest rate), the payment savings per month would be $34.49. The $34.49 savings is realized only as long as the loan is funded. If the homeowner pays off the mortgage after five years, the $34.49 savings is ended then. The value of the savings in this case is therefore simply the present value of the savings annuity for five years. The decision to pay the extra origination cost then becomes a net present value calculation of subtracting the incremental origination costs from the present value of the annuity. If the net present value is positive, then the homeowner should pay the additional costs. In this example, the lender would charge an additional fee of $2,225 to reduce the payment by the $34.49. To compute the net present value of paying the additional fee to receive the payment reduction, the expected duration of the loan must be estimated. Below is a table that computes the before-tax net present value assuming loan durations of 5, 10, 15, 20, 25, and 30 years. Included in this breakeven calculation is the value of the increased amortization of the lower interest rate loan. Also included in this analysis is the results from varying the cost-of-capital assumptions for the homeowner. The 5.25% rate was chosen as the initial cost of capital because that was the market interest rate of the loan prior to the loan buy-down to 4.875%. The 3% rate was chosen as an exemplary rate indicative of a short-term CD rate readily available to a homeowner at the time. The 10% rate was chosen because it is indicative of the rate a more sophisticated homeowner active in the stock market might expect over the long-run.

Loan Duration (Years)	Net Present Value (5.25%)	Net Present Value (3.00%)	Net Present Value (10.00%)
5	$126.38	$295.63	($184.60)
10	$1,777.18	$2,338.63	$866.80
15	$2,872.88	$3,909.50	$1,369.73
20	$3,484.62	$4,920.18	$1,571.13
25	$3,866.60	$5,646.24	$1,660.08
30	$3,996.47	$5,931.42	$1,680.53
Before Tax B/E	4.75 years	4.42 years	5.67 years

An after-tax analysis is more complicated. For purposes of the analysis in this paper, a 28% marginal tax rate was assumed. Also assumed in this analysis was that the homeowner immediately received the tax deduction benefit upon payment of points and mortgage payment rather than receiving the benefits upon filing.

As discussed above, a homeowner may be allowed to deduct mortgage points paid in the tax year they are paid. Thus, in the example above, a homeowner's after-tax cost of paying the additional $2,250 is reduced to $ 1,620 ($2250-.28*2250).

The lower payment benefit resulting from buying down the interest rate is reduced somewhat by the lower amount of interest that may be deducted with each payment. In this example, the homeowner would only be able to deduct $609.38 of interest on the 4.875% loan verse $656.25 in the first month of the loan. Thus the homeowner is losing a potential deduction of $46.87, the difference between these two interest amounts. This loss in deduction reduces the payment savings from $34.49 to $21.37 ($34.49-$46.87*.28). With every payment, the loss from the interest deduction slowly diminishes as the interest paid reduces with principle amortization.

Because of the erosion of the interest deduction during the loan term from the lower interest rate loan and the resulting reduction in the benefit of the payment differential between the higher rate payment and the lower rate payment as shown in the preceding paragraph, the after-tax impact on the break-even point is not as dramatic as might be expected with a reduction in the after-tax cost of paying the additional points. The table below illustrates the after-tax net present values assuming the same holding periods and costs-of-capital as in the before-tax analysis above.

Loan Duration (Years)	Net Present Value (5.25%)	Net Present Value (3.00%)	Net Present Value (10.00%)
5	$68.72	$199.14	($169.25)
10	$1,205.63	$1,635.00	$519.14
15	$1,933.15	$2,719.53	$816.45
20	$2,323.31	$3,404.94	$918.82
25	$2,556.17	$3,888.44	$954.04
30	$2,631.26	$4,074.76	$958.64
After Tax BE	4.83 years	4.42 years	5.92 years

The impact of the after-tax analysis on the decision is surprising. One would expect that the tax savings from the deduction of the up-front payment of points would create a significantly lower break-even point when considering tax consequences. However, the lost tax deductions resulting from lower interest payments offsets the tax savings from the points in most scenarios, even when the time value of the future interest payments is considered. The tax-adjusted effect actually increases the breakeven holding period in most cases as summarized below.

	Cost-of-Capital		
	5.25%	**3%**	**10%**
Before Tax B/E	4.75 years	4.42 years	5.67 years
After Tax BE	4.83 years	4.42 years	5.92 years

Impact of Tax Rate

Using the above sample mortgage loans, the breakeven point was calculated for 15% and 35% marginal tax rates so that the after-tax results could be compared with that of the 28% rate used above. The results are displayed below.

	Cost-of-Capital		
MTR	**5.25%**	**3%**	**10%**
15%	4.75 years	4.42 years	5.83 years
28%	4.83 years	4.42 years	5.92 years
35%	4.83 years	4.42 years	6.08 years

As seen above, lowering the marginal tax rate to 15%, or raising it to 35%, has little impact upon the breakeven point. One observation that should be made here is that taxpayers in the 15% tax bracket may not have enough deductions to warrant itemizing their deductions. Therefore, their after-tax analysis may actually be the same as their before-tax analysis. However, if the payment of points puts them into a situation where they could itemize their deductions in the year the loan is originated, but they take the standard deduction in subsequent years, then the break-even holding period will be significantly reduced. Likewise there is a difficulty in this analysis for higher income taxpayers whose adjusted incomes exceed $145,950 (2005). In this case, itemized deductions (including interest) are phased out at a rate of 3% for every $1 their income exceeds $145,950. Consequently, the tax deduction for their interest and points paid may be slightly less valuable.

CONCLUSION

There are many other factors that might influence the estimation of the expected duration of the loan where the loan might be paid off before the loan matures. These factors might impact the choice of paying additional points to reduce the interest rate. Ultimately this determination must be made by the homeowner. Some of the issues influencing this decision include the estimation of how long the homeowner will continue to own the home. Are there job relocation possibilities that would lead to the homeowner needing to relocate? Is there an expectation of a decline in interest rates that would suggest re-financing of the property? Are there health issues such as the increasing difficulty of climbing stairs or lawn maintenance that will make the property less attractive and lead to the sale of the property?

As shown by this study, however, most homeowners would be financially better off by choosing to pay the additional points to reduce the interest rate on the loan as long as the homeowner expects to keep the property for at least four years. This assumes mortgage rate differentials and points charges will be similar to those used in the examples above.

REFERENCES

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Jerry D. Belloit is a professor of finance and real estate at Clarion University of Pennsylvania. He received his Ph.D. in Real Estate and Urban Analysis from the University of Florida. His other research interests are real property law, financial institutions, and urban analysis.

Anthony F. Grenci is a professor of accountancy at Clarion University of Pennsylvania, Clarion, PA. He received his Ph.D. in Accounting from the University of Pittsburgh. His other research interests include various applications of Benford's Law, the financial markets, and information technology.