TAX IMPLICATIONS OF MORTGAGE PRINCIPAL REDUCTION IN RETURN FOR PREPAYMENT

by Patricia M. Rudolph

Mortgage lenders holding large amounts of mortgages which carry below-market yields are encouraging borrowers to repay the debt by offering to reduce the balance outstanding. This reduction in the principal or "forgiveness of debt" is considered part of taxable income, and the borrower will be required to pay taxes on it at ordinary income tax rates [Regs. Sec. 1.61-12(a)]. This taxability of the reduction in principal significantly reduces the benefit to be derived by the borrower from prepayment. In this brief article, the after-tax costs and benefits of prepayment are compared.

The holder of your mortgage offers to reduce your outstanding balance if you will prepay. The lender is willing to reduce the balance because the mortgage carries a below-market rate. In evaluating this offer, the reduction in the outstanding balance must be weighed against the interest that could be earned by investing the principal. Although this calculation seems entirely straightforward, several tax implications must be included to obtain a clear picture of the costs and benefits involved. Obviously, the interest received from investing the principal as well as the interest paid on the mortgage must be put in after-tax form. Equally important is the fact that the reduction in principal is a forgiveness of debt and therefore part of taxable income.

The benefit of the decreased debt is received in the current period. The interest which could be earned by investing the principal less the interest paid to the mortgage holder would be received in the future. To compare the two, calculate the present value of the after-tax net interest earned and compare this with the after-tax reduction in the principal. If the reduction in the after-tax balance is greater than the present value

of the after-tax net interest earned, it is worthwhile to repay the debt.

To illustrate, suppose the loan balance of $1,000 is to be repaid with three annual payments of $402. The mortgage holder offers to reduce the balance to $940 if the loan is prepaid. The marginal tax rate is 40 percent. If the loan is not prepaid, the outstanding principal can be invested at 15 percent in each year, but interest at 10 percent on the mortgage must be paid. The difference between earned interest and interest paid is

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TABLE

Present Value of Net Investment Payments

(1) Loan Balance at Beginning of Period	(2) Payment	(3) Principal Reduction	(4) Interest Paid	(5) Earned Interest = .15(1)	(6) Net Interest Before Taxes (5) − (4)	(7) Net Interest After Taxes (1-t) (6)	(8) Present Value of (7)
$1,000.00	$402	$302.00	$100.00	$150.00	$50.00	$30.00	$26.09
698.00	402	332.20	69.80	104.70	34.90	20.94	15.83
365.80	402	365.42	36.58	54.87	18.29	10.97	7.21
							$49.13

the net interest before taxes. By multiplying the pretax net interest by (1-t) where t is the marginal tax rate, the after-tax net interest is calculated. Next, calculate the present value of this income using the 15 percent return on alternative investments as the discount rate.

$$PV = \sum_{t=1}^{N} \frac{(1-t)\ [\text{Earned Interest-Interest Paid}]}{(1+r_E)^t}$$

where r_E is the interest rate which can be earned if the balance is invested. The actual calculation is contained in the Table.

The after-tax value of the net interest income is $49.13. The lender has offered to reduce the loan balance by $60. However, this $60 is taxable income which must be converted to after-tax terms. If the marginal tax rate is 40 percent, then the $60 will be $36 in after-tax income. This $36 benefit is less than the after-tax value of the interest, $49.13, and it is not worthwhile to repay the loan.

From this example it is clear that taxes have a significant impact on the decision to prepay a mortgage in return for a reduction in principal. If the before-tax reduction in the loan balance, $60, is compared with the value of the interest, $49.13, it appears that prepayment would be advantageous to the borrower. However, when the taxability of the debt reduction, $36, is considered, the borrower will lose by prepaying.