MORTGAGE REFINANCING: THE INTERACTION OF BREAK EVEN PERIOD, TAXES, NPV, AND IRR

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This paper provides pertinent information for investors about refinancing their mortgage. We discuss the input variables and how to compute the breakeven number of months when deciding to refinance a mortgage. We incorporate the interest rate tax effects that are normally ignored by investors when making their refinancing decision. We also compute the NPV and IRR to allow one to analyze refinancing as an investment decision.

In this paper we examine the tax impacts of home mortgage refinancing from a financial analysis framework. More specifically, we examine the after-tax savings resulting from a refinancing transaction when considering the lost tax savings from the higher interest rate on the old mortgage. Additionally we provide an Excel model for the reader to use to perform their own analysis which includes the NPV and the IRR for various time periods.

We provide relevant information about the largest asset in investor's portfolio, their mortgage. We provide 4 scenarios; varying the mortgage amount, term, and interest rate. Breakeven varies from 1 to 4 years for a $100,000 mortgage. When the lost interest tax deduction is considered, the number of months to breakeven increases by about 35%. This information can be very useful to investors when making their refinancing decisions. We have also developed an Excel model to perform this analysis and utilize Goal Seek to optimize the solution. A copy of this Excel model is available at: www.stetson.edu/~smichels