

## **YIELD MAINTENANCE PREPAYMENT PENALTIES**

By Patrick Niland

In broad terms, yield maintenance is a process for protecting lenders from losing interest when loans are paid off before their maturity date. A loan is a contract under which the lender agrees to provide funding for a period of time and a borrower agrees to pay interest (and sometimes a little bit of principal) during that period and then pay the remaining balance to the lender at the end of the period. The lender counts on receiving the specified amount of interest over the specified loan term as their return on their “investment” in the loan.

The contract protects the borrower by preventing the lender from calling the loan before the maturity date, even if interest rates in the market go up and the lender could make more money by cancelling existing loans and making new ones at current rates. However, the contract does not give the lender similar protection by preventing the borrower from paying the loan off early...although the prepayment provisions of the contract compensate the lender for such prepayments. So, in the overall scheme of things, borrowers get the better end of the deal.

In the “good old days,” lenders just charged a set penalty (usually a fixed percentage of the outstanding balance that declined over time) based on when the borrower prepaid. Eventually (about 10 years ago), lenders realized that those set amounts did not fully compensate them for the cost of reinvesting the prepaid loan amounts...especially in times of declining interest rates. So, most lenders changed to a formula that came closer to recognizing the true time-value of money in the market environment prevalent when the prepayment occurred. Again, in the overall scheme of things, this was more equitable toward lenders. Hence, yield maintenance has become the standard for virtually all commercial real estate loans...not just underlying mortgages. I do not see this changing in my lifetime.

The calculation of any yield maintenance prepayment penalty is an ever-changing exercise because most of the determinants change daily in response to market forces. However, like all penalties, yield maintenance tends to decline over time...the closer the loan is to maturity, the smaller the penalty becomes. As an example, let's take a new loan of \$3,750,000 for 10 years at 2.30% over the 10-year treasury with 40-year amortization. If we assume that all interest rates remain exactly where they are now over the next 10 years, then the prepayment penalty would be about:

\$667,000 after 3 years...

\$530,000 after 5 years...and

\$273,000 after 8 years.

Nonetheless, all of the above numbers are large...but they could be even larger, or much smaller, if interest rates moved in the right combination of ways. Remember, the penalty is based on the present value of the interest that the lender will lose because the loan gets prepaid. That number depends on the timing of the prepayment, the amount prepaid, and the market rate for a treasury security with a maturity equal to the remaining term of the loan when it gets prepaid. Therefore, predicting prepayment penalties is, at best, a guessing game. That's why no one makes loan decisions based on the possible prepayment penalty. Instead, most borrowers forecast their cash

needs (and loan amount) with enough of a cushion such that the potential need to prepay due to lack of cash is minimized.

In short, the goal is not to find a loan with a small or no prepayment penalty...so you can refinance at little cost when you run out of money before you run out of loan term. The goal is to borrow enough money in the first place such that the likelihood of running out of money during the loan term is minimized.